

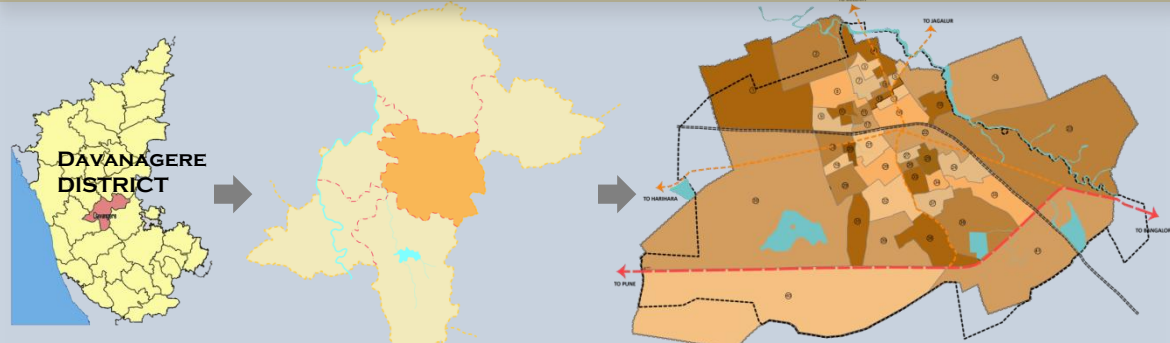
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	Feature	Definition	Scenario 1 (BASE)	Scenario 2	Scenario 3	Scenario 4 (ADVANCED)	Self-assessment for the full city with regard to each feature	Basis for assessment and/or quantitative indicator (Optional - only if data exists)	Projection of 'where the city wants to be' with regard to the feature/indicator based on the city vision and strategic blueprint	Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G)
1	Citizen participation	A smart city constantly shapes and changes course of its strategies incorporating views of its citizen to bring maximum benefit for all. (Guideline 3.1.6)	The City begins identifies priorities and projects to pursue without consulting citizens.	City undertakes citizen participation with some select stakeholders. The findings are compiled and incorporated in some projects or programs. Very few major decisions are shared with citizens until final projects are unveiled.	City conducts citizen engagement at city level and local area level with most stakeholders and in most areas. The findings are compiled and incorporated in projects or programs.	City constantly conducts citizen engagement with people at each Ward level to incorporate their views, and these shape priorities and development projects in the city. Multiple means of communication and getting feedback such, both face-to-face and online are utilised. The effectiveness of city governance and service delivery is constantly enhanced on the basis of feedback from citizens.	Scenario 2	All major decisions are taken at meetings at the city corporation presided by the mayor, chairman of standing committees, commissioner, deputy commissioners, 41 corporators and representatives of 41 ward committees who represents the wards as	Scenario 4 (Advanced)	Decide Course of action based on continuous citizen engagement and their feedback and prioritize the action plan based on feedback from citizens. The city plans to use ICT as the tool for citizen engagement and two way communication.
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 buildings and areas are created without much thought to how they reflect the identity and culture of the 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 enhanced 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 3	Identity and culture are preserved and displayed to some extent especially during festivals like Durgambika Devi Jatra, Dassara Festival and Davanagere Cultural Festival every year. The Durgambika Devi temple and Vinayaka Temple are the major landmarks and stress is given to cultural preservation while construction of new buildings both in govt as well as private.	Scenario 4 (Advanced)	Renovate and Preserve the historical Durgambika Temple and Vinayaka Temple area in the city which is the main symbol of culture and heritage of the city. Use of more Kalyana Mandapams for marriage and social functions and during festivals which are designed and built to reflect local Kannada Architecture.
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 opportunities 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 attempts 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 2	MSME sector, Food Processing, Engineering, education sector, flour mills, saw mills, wholesale and retail trading, garment industries, puffed rice production, scrap dealing and agriculture are the main drivers of economy and employment generation in Davanagere	Scenario 4 (Advanced)	The city wants to develop more entrepreneurs through large scale development as it already has more than 85 percent literate population and food and agro processing has a large opportunities in the city. Skill Development is also planned to encourage entrepreneurship and generate more opportunities
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 3	With more than 200 schools, 32 general degree colleges, 4 engineering, 2 dental and 2 medical colleges having literacy rate of 85 percent, Davanagere is known as the Oxford of Karnataka.	Scenario 4 (Advanced)	The city wants to further build and improve upon the primary, secondary, pre-university and higher education and professional courses already available in the city through its data base of student enrolment and introducing IT services to enable its population and even outside citizens to access education across all levels to achieve 100 percent literacy rate.
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 diseases and develop response systems and preventive care.	Scenario 3	With 75 nos private hospitals and nursing home and 2 nos Government Hospitals and 5 Primary Health Care Centres, and a total number of 4416 beds with an average of 8.8 beds per 1000 population, the city has sound healthcare facilities. There are 72 diagnostics laboratory also.	Scenario 4 (Advanced)	The city wants to develop more hi tech hospitals through private participation and improve the bed to population to 3 per 1000 with IT enabled Health Care services like tele medicine and specialist doctors on call through video conferencing that will help in closely monitoring of health for elderly and vulnerable citizens.

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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-existence 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 segregating 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 2	Mixed land use exists in some places in Davanagere especially in the northern parts of the city but in the southern parts of the city there are only small retail stores with basic supplies near housing. Most residents drive or use some para transportation to access a shop for food and basic daily needs, but land use rules support segregating housing, retail, and office	Scenario 3	The city wants to redevelop some parts or area which will enable to have housing, retail, and office buildings in close proximity with small industrial units closely located located mainly small food and agro processing industries. With the proposed increase in FAR, land use pattern will change to mixed use to a very high extent.
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 occurring 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	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	The city is quite spread out. Spatial growth is taking place along the southern periphery with large scale residential development while the northern part is compact. New development is occurring in the southern side that is quite sprawling. In both the northern and southern sides there are roads which are busy with mixed traffic.	Scenario 4 (Advanced)	With proposed increase in FAR from current 1.5 to 2.5 the city will become highly compact and dense with making most of the land within the city. Retrofitting and redevelopment in the northern parts will also make it highly compact and free more land to create more space for other services.
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 3	The city has sufficient parks but are not organized an not within easy reach of more vulnerable population as is in the northern parts, there are 220 parks and open spaces available in the developed layouts. The existing Park and open space area accounts to 163 Hac. In the Master Plan 2021, the area is proposed to increase by	Scenario 4 (Advanced)	The city has planned to increase the area of parks and open spaces to 539 Hac from the present 163 Hac i.e up to 8 percent of the total area and maintain and preserve them through engaging the private sector for operation and maintenance.
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. Affordable, moderate, and luxury housing are found clustered together in many areas of the city	Scenario 2	There are 38 notified and 12 non-notified slums in the city. Most of them have become permanent settlements. Most of the slums are located along the Northern - Old Davanagere where there is a shortage of housing. Housing is available to high and middle income groups in the southern	Scenario 4 (Advanced)	The city is implementing the schemes for housing sanctioned under the erstwhile RAY scheme and also has plans to declare slum free city by providing house for all its population under the Housing for all scheme. Also affordable, moderate, and luxury housing are found clustered together in southern part of the city and will also be available in the northern part after redevelopment.
10	Transport	A Smart City does not require an automobile to get around; distances are short, buildings are accessible from the sidewalk, and transit options are plentiful and attractive to people of all income levels. (Guidelines 3.1.5 & 6.2)	Personal automobile centric city with very few modal options. Long trip lengths for daily commute to work and education. Accessing various areas by walking or cycling is difficult. Women and vulnerable sections find it very difficult to move independently in the city. There is limited public transport. Vehicles cause high air and noise pollution levels in the city. Vehicles dominate public spaces and affect their effective functioning.	The street network system is elaborate but public transport choices are restricted. Public transport can be too expensive or unaffordable for the poor. Pedestrian infrastructure is only available in select areas. The 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 stations and organized-priced on street and off street parking. Walking and cycling is prevalent.	Scenario 2	The city has a public transport system with a fleet size of 69 buses but low operational ratio which may need considerable improvements in terms of supply of buses/ coaches and coverage as most parts of the city are not served by it. The frequency of the services available needs improvements. The system provided is not comfortable as there is considerable over loading.	Scenario 4 (Advanced)	Road area and network of the city is very much adequate. Only a good city bus service is missing. Based on citizens input the city plan to have a sound city bus service with upgraded bus shelters / stations supported by intelligent traffic management and automated signals and passenger information systems all supported by IT. Also adequate facilities non-motorized traffic like cycle tracks are being planned in the coming future to have 100 percent coverage of the city.

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11	Walkable	A Smart City's roads are designed equally for pedestrians, cyclists and vehicles; and road safety and sidewalks are paramount to street design. Traffic signals are sufficient and traffic rules are enforced. Shops, restaurants, building entrances and trees line the sidewalk to encourage walking and there is ample lighting so the pedestrian feels safe day and night. (Guidelines 3.1.3 & 6.2)	The city is designed mainly for the automobile. Daily life without a car requires long bus rides. Walking is difficult and often dangerous; there are few pavements, existing pavements need repair and lack trees to provide shade for pedestrians, 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 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 accessible from the front of the street. Large driveways or parking lots often separating them from the street, and sometimes 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. However, 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 2	The city has pedestrian facilities which need improvements in intersections, footpaths and street lighting as some parts of the city are not served by it. The footpaths available need improvements.	Scenario 4 (Advanced)	Though the existing pedestrian facilities need considerable improvement, the city plans to have a 100 percent network of pedestrian footpath in order to have 100 percent walkability for the pedestrian traffic which is very high and buildings become more easily accessible from sidewalks.
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	The city has an existing network of BSNL from which it provides IT connectivity to govt offices and city corporation. IT connectivity is available in southern parts of the city but 100 percent coverage is not yet achieved	Scenario 4 (Advanced)	Being the education hub of the state, the city already has plans in place for a 100 percent IT connectivity in another 2 to 3 years time that will also enable inter governmental co-ordination and citizen connected and oriented.
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. Receiving 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. Systems 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 infrastructure system shares information and enhances internal governmental coordination.	Scenario 2	Information with respect to the data regarding population, statistics regarding quantity of assets of the corporation, sectoral services provided by the ULB. Accounts data are also published in the website from time to time for assessment of tax liability of the citizens. "Sakala" - On time and online citizen services are in place, But all the citizen related services are yet to	Scenario 4 (Advanced)	Plans to have a robust wi fi network for its citizens so that all services and interconnected and information and data pertaining to the city like physical, social infrastructure, ULB accounts, tax assessment for citizens, status of projects undertaken, can be accessible online through ICT enabled services through mobile phones.
14	Energy supply	A Smart City has reliable, 24/7 electricity supply with no delays in requested hookups. (Guideline 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 3	Over 20 percent of the city's energy needs are served by hydel power where there is shortage due to insufficient rainfall recorded in the state in the current year resulting in a power outage of 3 to 4 hours daily which it is planning to meet through alternate sources like wind, solar etc..	Scenario 4 (Advanced)	As per BESCO, the city has plans to ensure the 24 x 7 energy supply with metering as well as pre-paid metering system to be controlled online and complaints suggestions exchanged through mobile apps.
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 foreseeable 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 in 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 2	The city is trying to make up for the shortfall in energy supply of upto 20 percent through alternative means like solar power, windpower.	Scenario 4 (Advanced)	As per BESCO, the city has plans to make up the 20 percent shortfall in demand for the 24 x 7 supply through alternative sources like solar power 10 percent in the coming 2 to 3 years and providing incentives for installing roof top solar panels

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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 sufficient quantity and affordable across all sections of the society. Unaccounted loss less than 15%.	Scenario 2	The supply per capita is 100 lpcd against the specified benchmark of 135 lpcd, around 60 percent or 62897 nos households are yet to get tap connection. But with implementation of Water Supply Scheme already sanctioned under Jalasiri 24 x 7 water supply will	Scenario 4 (Advanced)	With implementation of the water supply scheme under Jalasiri, 24 x 7 supply at 135 lpcd with metering will be implemented and all domestic household and commercial tap connection shall be covered under AMRUT and smart solution under the smart city mission.
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 wastage is very high. Some, but not much, rainwater harvesting exists.	The city 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 reuse 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 2	There is no metering system in place at present and no system in place for recycling of waste water or provision of rain water harvesting	Scenario 4 (Advanced)	All meters are to be installed under the Jalasiri Scheme. Achieving smartness by linking to online platforms for monitoring, transparency and proper billing shall be done under Smart City Mission. Also rain water harvesting and recycling of waste water scheme are in the pipeline in the coming 3 to 4 years.
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 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 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 and reduces the need for fresh water.	Scenario 2	Though all the sewage generated is to be treated at the 45 MLD STP being set up using SBR Technology under KUIDFC project but there is no recycling of water	Scenario 3	The city has plans to minimize the waste water as much as possible through recycling and secondary use like farming, agricultural use and industrial use and minimize the need for fresh water.
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 2	Though air quality at 4 to 5 congested locations in the city are regularly monitored by Karnataka State Pollution Control Board but very few actions have been taken to reduce the same which are at acceptable level except the northern part especially Mandakki Batti Area where SO2, NO2, SPM are very much above permissible limits	Scenario 3	City has programs in place to monitor air quality and is aware of the reasons causing air pollution. With the area based development proposed for Mandakki Batti Area and use of advanced clean heating technology for the industrial units, pollution levels throughout the city will be reduced to acceptable limits.
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 efficiency in buildings	The city promotes energy efficiency and some new buildings install energy efficiency systems that track and monitor energy use and savings.	Most new public buildings install energy efficiency 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 efficiency strategies	All the existing old and new public buildings employ energy efficiency 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 incentives and regulations.	Scenario 2	The concept of energy efficient building has only been recently introduced by the city and new buildings constructed are installing energy efficient meters	Scenario 4 (Advanced)	The city plans to make all public buildings green and energy efficient and encourage all private buildings to become green and energy efficient through incentive and regulations
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 1	Not yet in place but has to think of as citizens desire needs to be fulfilled	Scenario 4 (Advanced)	Based on citizens suggestions the city is developing plans to have a dedicated underground utility corridor to accommodate all services lines underground with a target of achieving 100 percent.
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 available to 70% of the city's population.	Sanitation facilities are available to 90% of the city's population.	Sanitation facilities are available to 100% of the city's population.	Scenario 2	Sanitation facility is widely available and has upto 70 to 80 percent coverage	Scenario 4 (Advanced)	To have 100 percent sanitation coverage within 1 to 2 years with introduction of 50 pay & use as well as community toilets.
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 segregated, 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 segregated 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	Door to door collection has been achieved around 80 percent but source segregation is not in practice, recycling has been started but in small quantity in the landfill site which has 33 acres of land	Scenario 4 (Advanced)	To have 100 percent solid waste management coverage and become a bin less city with 90 percent treatment within 3 to 4 years. Landfill site has enough space to accommodate for next 15 to 20 years.
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	The law and order situation is good and the sense of security prevails in the city with 10 police stations with separate police station for women having a total strength of 577 personnel. There is the system of E-beat policing in the city	Scenario 4 (Advanced)	With installation of 53 CCTV for upgradation, ICT application and crowd mapping, better policing across the city, the city law and order authorities expect to achieve high level of public safety throughout day and night.

INTRODUCTION

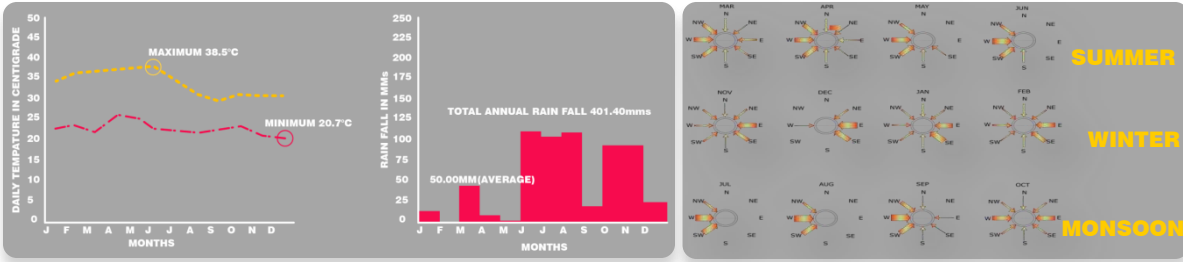


DAVANAGERE IS KNOWN AS THE "HEART OF KARNATAKA" FOR ITS CENTRAL LOCATION IN THE STATE. DAVANAGERE IS LOCATED IN THE TUNGA-BHADRA BASIN, NESTLED AT THE FOOTHILLS OF THE WESTERN GHATS.

DAVANAGERE HAS ITS NAME SYNONYMOUS WITH BODYBUILDING, L.M. KARIBASAPPA, EKALAVYA AWARD WINNER AND FIVE-TIME MR. INDIA TITLER IN BODYBUILDING IS FROM DAVANAGERE. DAVANAGERE HAS PRODUCED THE HIGHEST NUMBER OF MR. INDIA ATHLETES.



DAVANAGERE IS INFLUENCED BY THE LOCAL STEPPE CLIMATE. THE PLACE HAS HOT & HUMID CLIMATE - WITH 3 SEASONS THE AVERAGE TEMPERATURE IS 25.7°C AND AVERAGE RAINFALL IS 613 MM, WITH HIGHEST PRECIPITATION IN OCTOBER



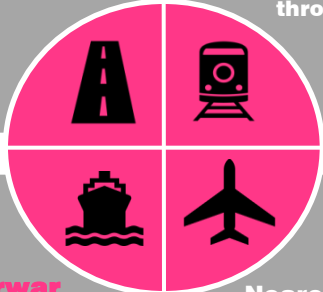
REGIONAL LINKAGES

NH4, SH 65 & SH 76 pass through the district connecting it with major cities and states across India

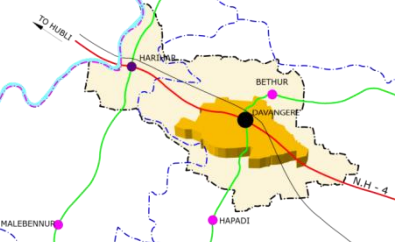
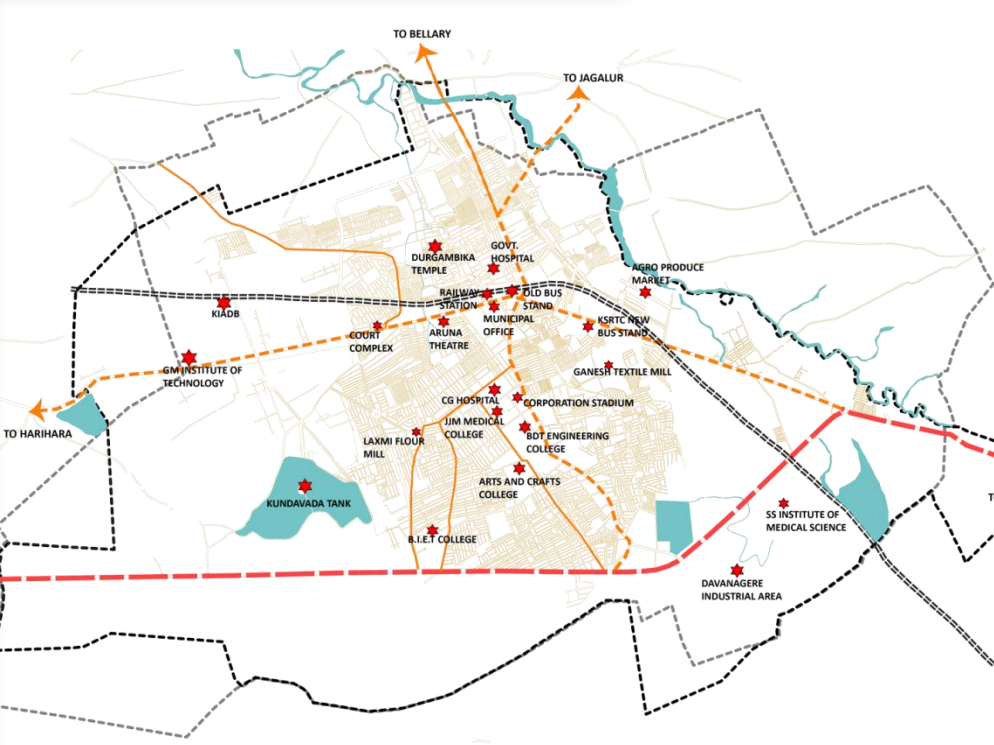
Connected to Bengaluru, Goa, Mumbai, Ahmedabad through the Harihara-Davanagere rail line

Nearest Port is Karwar and Mangalore

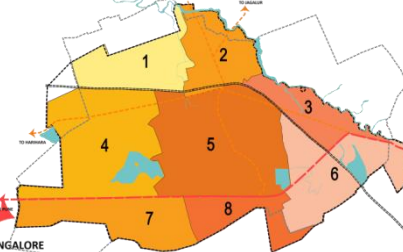
Nearest Airport is Hubli and the nearest International Airport is Bengaluru



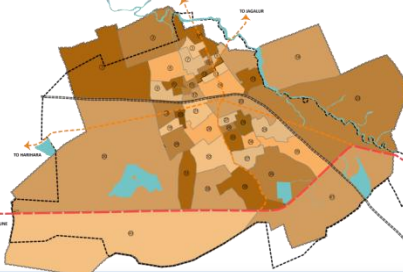
LANDMARKS



DAVANAGERE - HARIHARA LPA (DUDA)



DAVANAGERE MUNICIPAL CORPORATION DISTRICTS

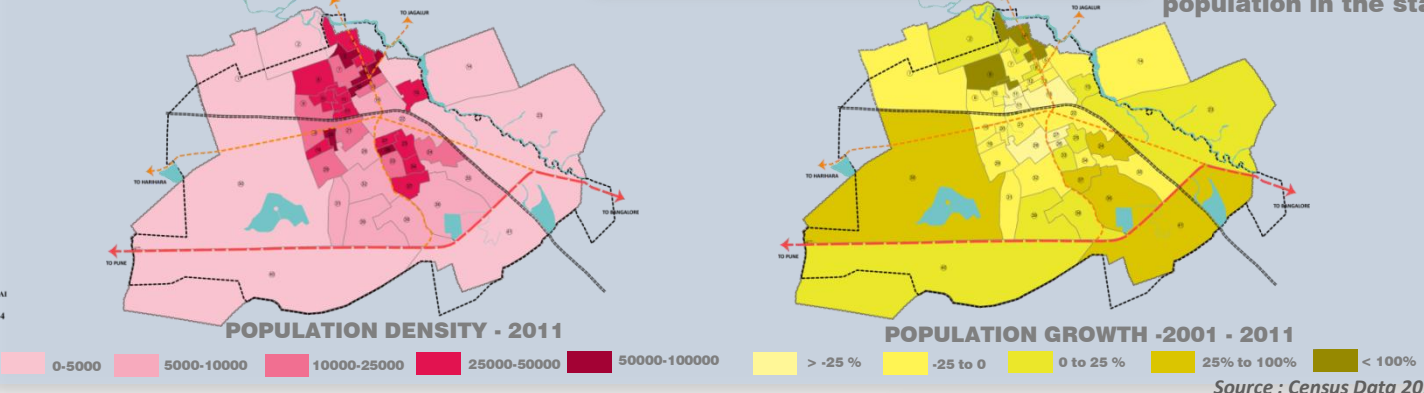
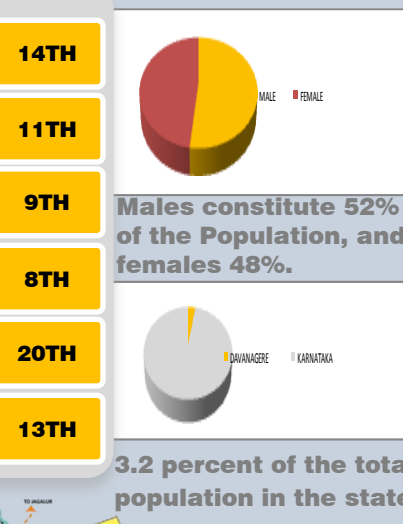


DAVANAGERE MUNICIPAL CORPORATION - WARDS

DEMOGRAPHICS

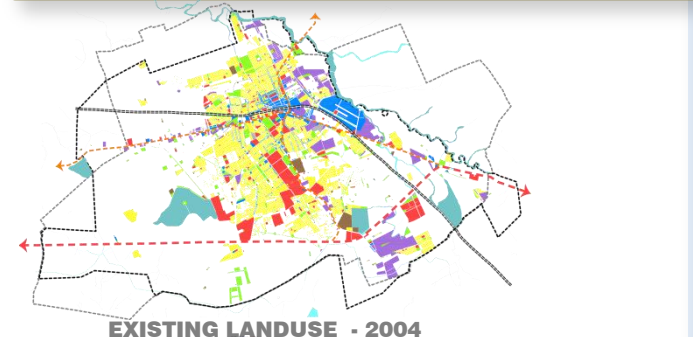
DEMOGRAPHIC FEATURES (2011)	
TOTAL POPULATION (2011)	4,34,971
AREA (KM ²)	68.63KM ²
AV. DENSITY (PERSONS/KM ²)	6338
TOTAL HOUSEHOLDS	94458
AV. HOUSEHOLD SIZE	4.6
SEX RATIO (PER 1000 MALES)	979
LITERACY RATE (%)	85 %

Davanagere District's position in the state IN TERMS OF AREA
POSITION IN THE STATE IN TERMS OF POPULATION DENSITY
POSITION IN TERMS OF POPULATION IN THE STATE-1,945,497
POSITION IN TERMS OF URBAN POPULATION IN THE STATE
POSITION IN TERMS OF DECADAL GROWTH RATE IN THE STATE
POSITION IN PROPORTION OF CHILD POPULATION IN THE STATE

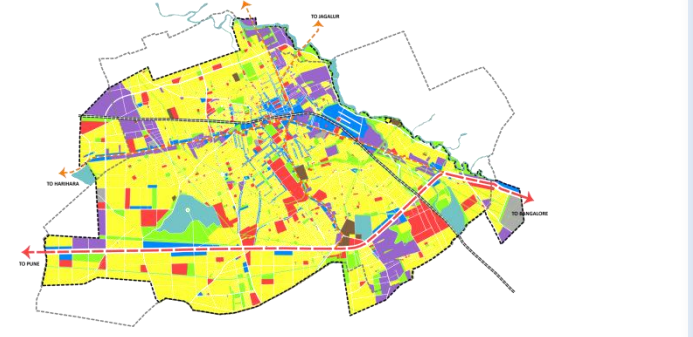


Source : Census Data 2011

LANDUSE



EXISTING LANDUSE - 2004



LANDUSE PROPOSED - 2021



ECONOMIC PROFILE

MAJOR CONTRIBUTORS:

- AGRICULTURE**
- FOOD CROPS
 - COMMERCIAL CROPS
 - FRUIT CROPS
 - SERICULTURE

- EDUCATION**
- MEDICAL COLLEGES
 - ENGINEERING COLLEGES
 - DENTAL COLLEGES
 - POLYTECHNIC
 - SCHOOLS

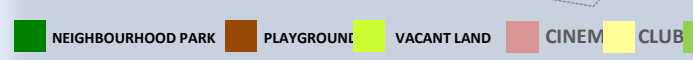
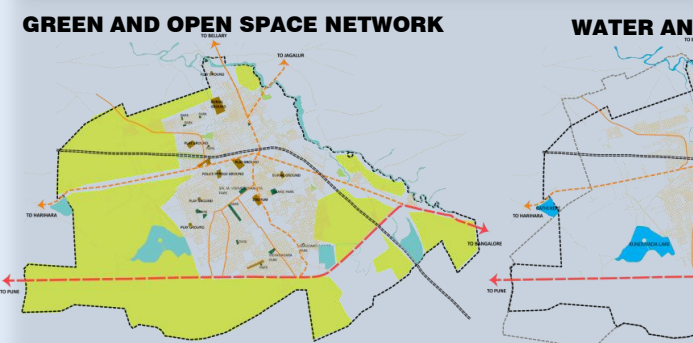
- INDUSTRIES**
- TEXTILE INDUSTRIES
 - GARMENT INDUSTRIES
 - AGRO BASED INDUSTRIES
 - FOOD PROCESSING
 - GENERAL ENGINEERING

- TRADE AND COMMERCE**
- WHOLESALE TRADE
 - RETAIL TRADE

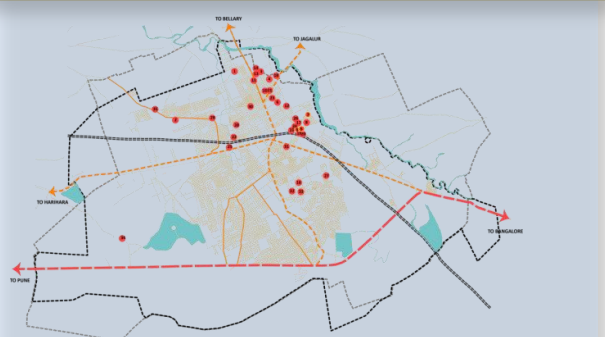


DAVANAGERE - MAJOR TRADING CENTER IN CENTRAL KARNATAKA DOMINATED BY EDUCATION AND AGRO-PROCESSING INDUSTRIES. THE WORKERS IN PRIMARY ACTIVITY CONSTITUTE ONLY 6 PERCENT, AND SHIFT TOWARDS SERVICE SECTOR. MORE THAN 85 PERCENT OF THE PEOPLE ENGAGED IN THE TERTIARY SECTOR. THE AREA UNDER WHOLESALE TRADE 58 HECTARES (2% OF CITY AREA) AREA UNDER INDUSTRIES BY KSIDC IS 154 HECTARES (0.3% OF CITY AREA)

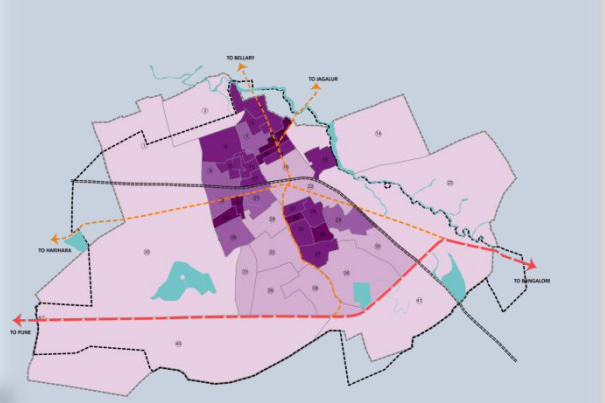
NATURAL SYSTEMS



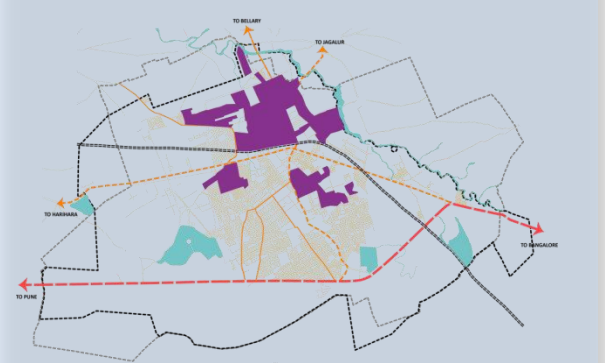
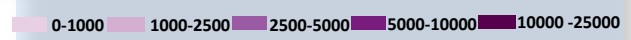
HOUSING



LOCATION OF SLUMS



HOUSEHOLD DENSITY

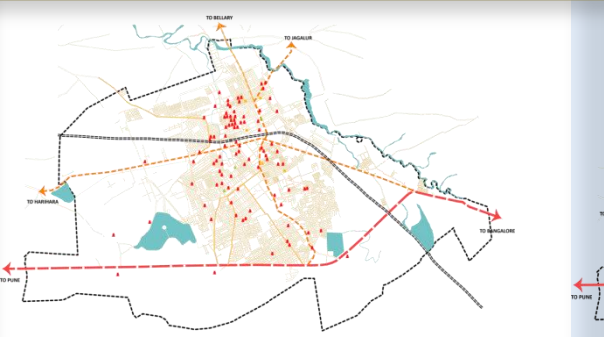


CONGESTED AREAS

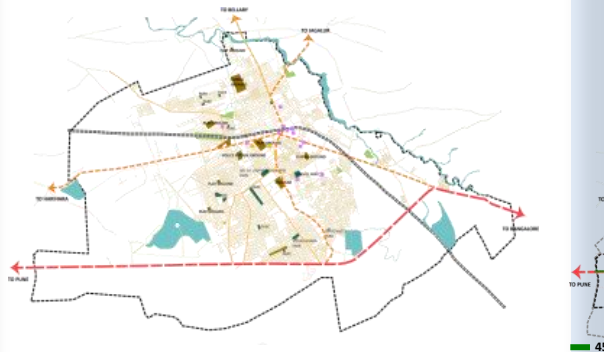
KUNDUVADA KERE SOURCE OF DRINKING WATER FOR THE CITY. SPREAD ON CLOSELY 253 ACRES OF LAND.

THE EXISTING PARK AND OPEN SPACE AREA ACCOUNTS TO 163 HAC., THE AREA IS PROPOSED TO INCREASE BY 539 HAC.

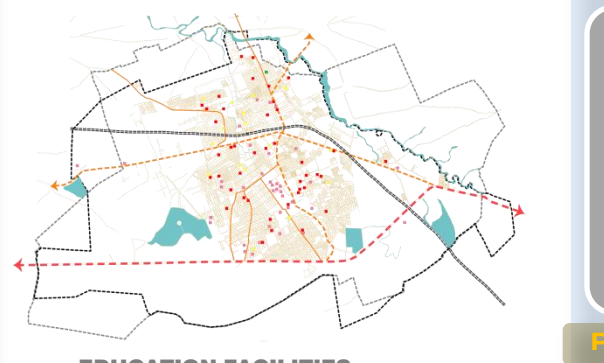
SOCIAL INFRASTRUCTURE



RELIGIOUS FACILITIES



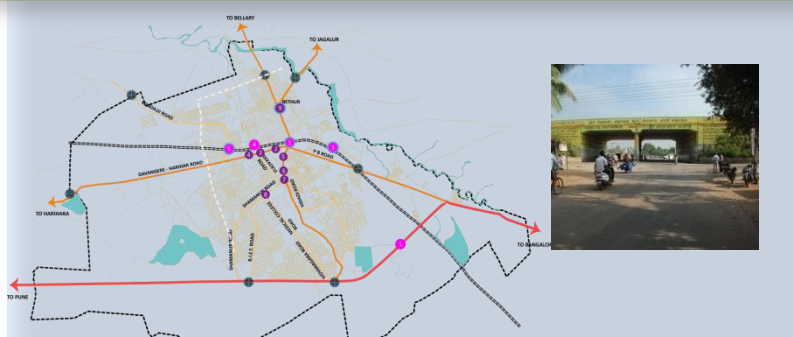
COMMUNITY OPEN SPACE



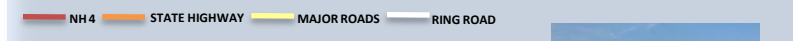
EDUCATION FACILITIES



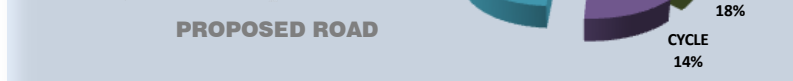
ROAD NETWORK | TRAFFIC | PARKING



PROPOSED ROAD

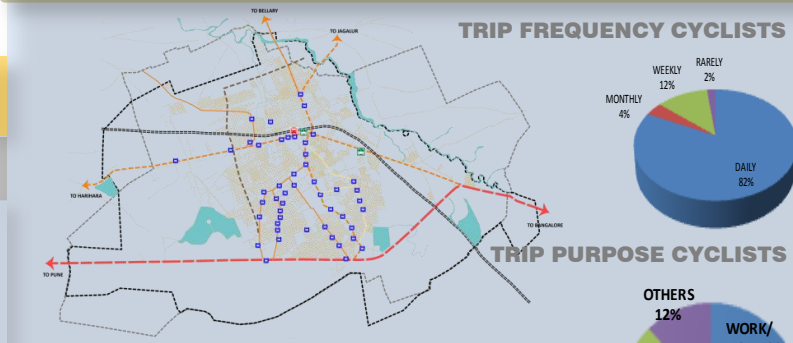


MODAL SPLIT IN DAVANAGERE



- RUB/ROBS**
1. ROB AT NH-4 NEAR SS INSTITUTE
 2. RUB NEAR CENTRAL WARE HOUSE
 3. RUB NEAR APMC MARKET LEVEL CROSSING AT GANDHI CIRCL
 4. RUB NEAR MANDIPET JUNCTION
 5. RUB NEAR FOREST DEPARTMENT OFFICE
- MAJOR INTERSECTION**
1. GANDHI CIRCLE
 2. HANUMANTHAPPA JUNCTION
 3. HIGH SCHOOL JUNCTION
 4. ARUNA CIRCLE
 5. JAYADEVA CIRCLE
 6. AMBEDKAR CIRCLE
 7. VIDYARTHIBHARAN CIRCLE
 8. DR. MODI CIRCLE
 9. Bethur Junction

PUBLIC AND NON-MOTORISED TRANSPORT SYSTEM



TRIP FREQUENCY CYCLISTS

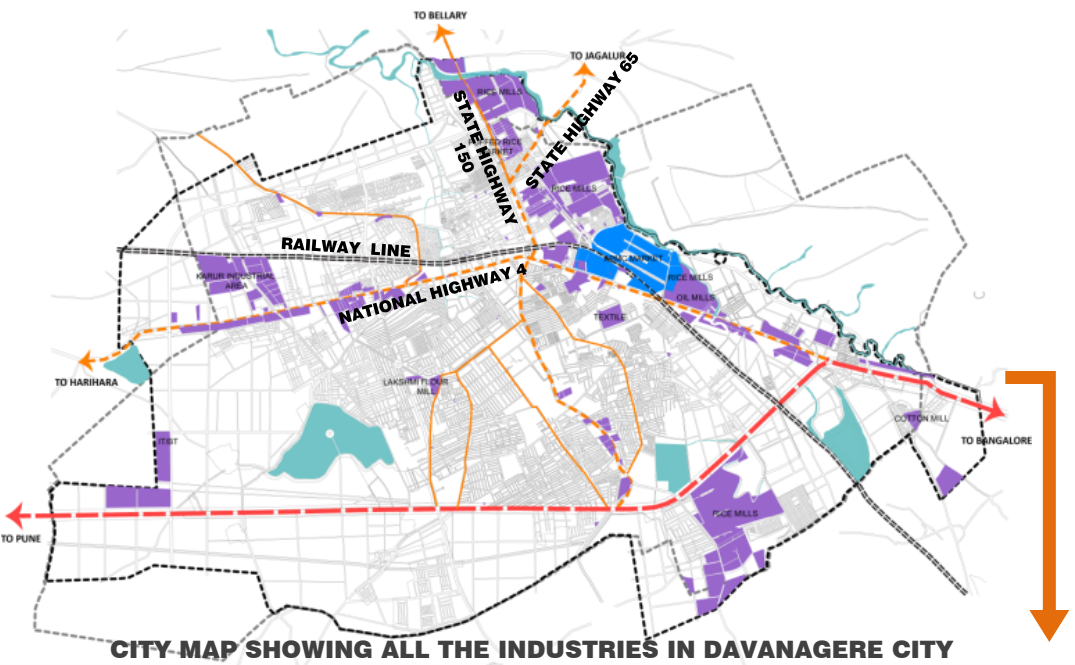
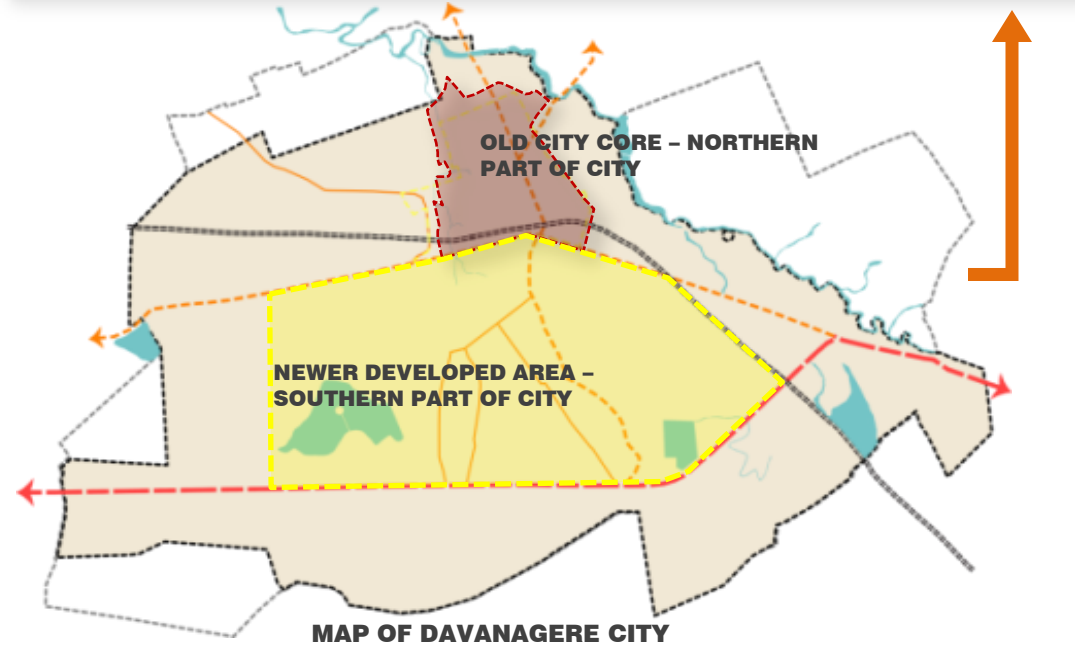


TRIP PURPOSE CYCLISTS

Problems while riding cycle	Rank
High Volume of Traffic	1
High Speed of Vehicles	2
Interference due to parking/pedestrians/bus stops	3
Bad condition of road/shoulders	6
Absence of proper lighting	4
Difficulty in crossing junctions	5

STRATEGIC PLAN

- DAVANAGERE CITY DIVIDED IN TWO PARTS BY THE RAILWAY LINE
 - THE SOUTHERN PART IS MORE DEVELOPED AS COMPARED TO THE NORTHERN PART
 - THE NORTHERN PART CONSISTS OF OLD CITY CORE WHICH INCLUDES ISSUES OF HIGH DENSITY, POOR PHYSICAL INFRASTRUCTURE
 - IRREGULAR GROWTH IN THE CITY
- PROPOSAL OF WHOLESOME DEVELOPMENT IN THE CITY**



- DAVANAGERE CITY IS KNOWN FOR ITS MSME INDUSTRIES
- **STRATEGIC PLAN - TO RE- ENERGIZE & REVIVE THE SME'S OF DAVANAGERE**
- RETROFIT OF MANDAKKI BHATTI (PUFFED RICE INDUSTRY) AS A TYPOLOGICAL INTERVENTION IN THE CITY
- MANDAKKI BHATTI REDEVELOPMENT IS AN EXAMPLE FOR THE OTHER SME INDUSTRIES TO BE REVIVED

ISSUES BEING ADDRESSED IN THE INTERVENTIONS

- ADDRESSING CITY'S WEAKNESS
- SUSTAINING ECONOMIC ACTIVITY
- TOUCHING MAJORITY OF LIVES
- INCLUSIVE GROWTH
- POLLUTION CONTROL
- URBAN TRANSPORT
 - LIMITED CITY BUSES
 - DEPENDENCY ON AUTO SERVICE
 - ON ROAD PARKING
 - PEDESTRIAN ON ROAD
- WATER SUPPLY
 - ABSENCE OF 24X7 SUPPLY
 - 60% HOUSEHOLDS DEVOID OF TAP CONNECTION
- WASTE MANAGEMENT
 - LOW COVERAGE
 - LITTERED BINS
 - PIG MENACE

OVERALL INTERVENTIONS RELATED TO L.I.F.E.

AREA BASED PROPOSALS

UPGRADATION OF SMALL & MEDIUM SCALE INDUSTRIES

MODERNIZATION OF INDUSTRIES, ENTREPRENEURSHIP, JOB CREATION & ECONOMIC GROWTH

REVITALIZING THE ECONOMIC AND HERITAGE PRECINCTS

SKILL DEVELOPMENT CENTRES, HERITAGE & CULTURAL CENTRE FOR THE CITY, UPGRADING EDUCATION & HEALTHCARE FACILITIES & POTENTIAL USE OF OPEN SPACE

QUALITY OF LIFE

LESSER CARBON EMISSION, REDUCTION IN POLLUTION, GREEN COMMUNITY SPACES, INCLUSIVE HOUSING

L.I.F.E

ICT INITIATIVES

SMART STREET POLES, WIFI HOTSPOTS, CROWDSOURCING, SMART PARKING FACILITIES, G.I.S MAPPING, WARD APP, SOLAR POWERED WATER QUALITY SENSORS, CCTV SURVEILLANCE, PAVEGEN TILES

PAN CITY SOLUTIONS

URBAN MOBILITY

PEDESTRIANIZATION, BICYCLE PARKING, DEDICATED NMT LANES, PUBLIC TRANSPORT, EASY & CONVENIENCE, DIGITAL DISPLAY & SIGNAGE

UNDER GROUND UTILITIES

STORM WATER, SEWER, ELECTRICITY, FIBRE OPTICS, TELEPHONE, WATER QUALITY SWALES

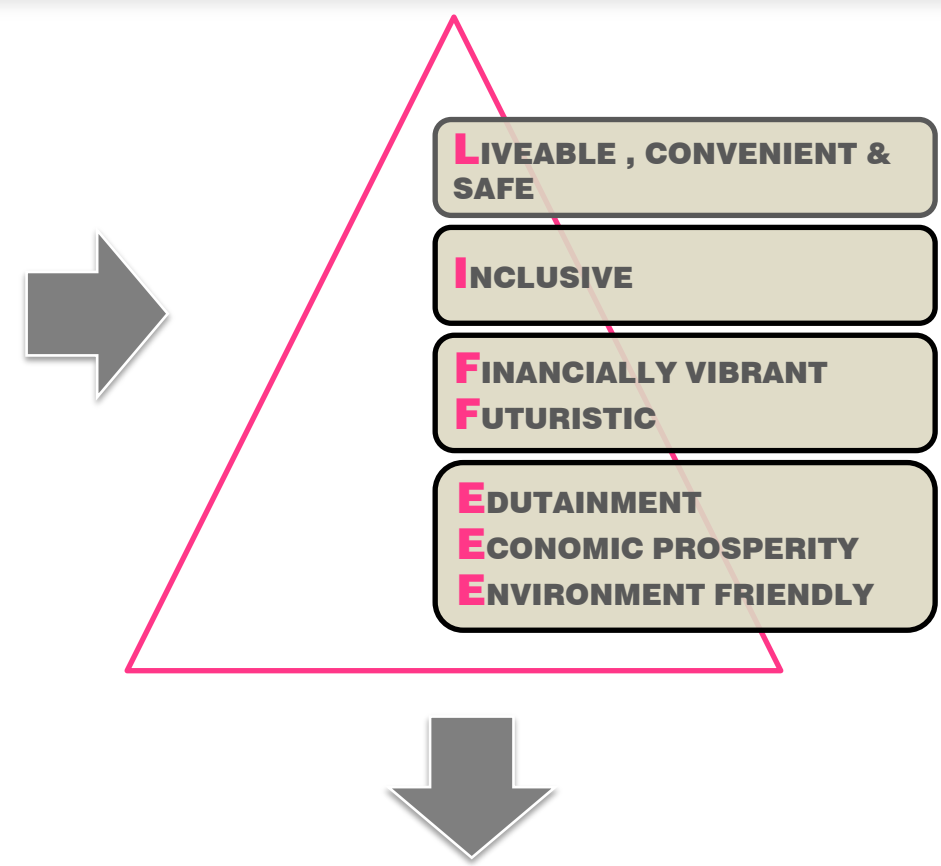
24/7 INFRASTRUCTURE

WATER SUPPLY, ELECTRICITY, SMART METERING, SOLID WASTE MANAGEMENT SYSTEM, ENERGY MANAGEMENT

VISION AND GOAL

KEY PERFORMANCE INDICATORS	WATER MANAGEMENT	WATER SUPPLY	SAFETY AND SECURITY	TRANSPORT (WALKABILITY)	IT	LAND USE	ENERGY SUPPLY	ECONOMY AND EMPLOYMENT	PUBLIC OPEN SPACES	COMPACT	IDENTITY AND CULTURE	HOUSING AND INCLUSIVE	AIR QUALITY	ENERGY EFFICIENCY	WASTE MANAGEMENT
PROPOSALS															
SOCIO ECONOMIC PRECINCT - MANDAKKI BHATTI REDEVELOPMENT															
HERITAGE AND CULTURAL PRECINCT – REVITALIZING THE RELIGIOUS IDENTITY OF THE CITY – DURGAMBIKA TEMPLE															
ECONOMICAL PRECINCT - MANDIPET MARKET REDEVELOPMENT															
PAN CITY PROPOSAL – URBAN MOBILITY AND SMART INFRASTRUCTURE															

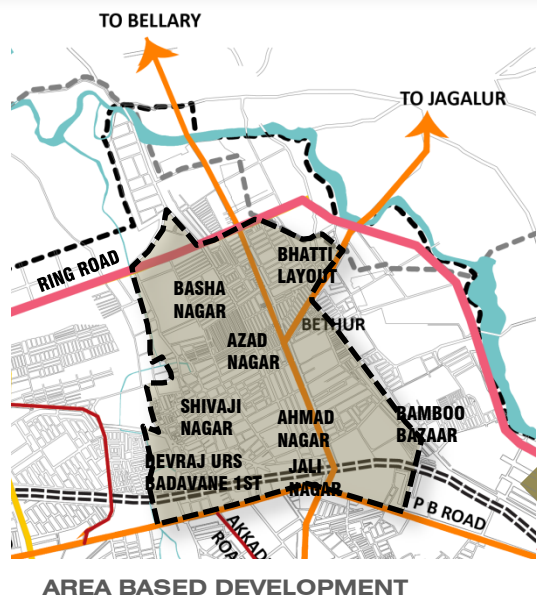
DAVANAGERE ASPIRES TO BE A CITY WHERE L.I.F.E NESTLES



VISION AND GOALS	LIVABLE AND CONVENIENT	INCLUSIVE	FINANCIALLY VIBRANT AND FUTURISTIC	ENVIRONMENT FRIENDLY & EDUTAINMENT
PROPOSALS				
SOCIO ECONOMIC PRECINCT - MANDAKKI BHATTI REDEVELOPMENT	SELF SUSTAINABLE AND WALKABLE PRECINCT, SOLAR PANEL ROOF TOPS ON INDUSTRIES, HEALTH MEASURES CONSIDERED	SLUM REDEVELOPMENT, SKILL DEVELOPMENT, BETTER QUALITY OF LIFE	LARGE OPEN GREEN SPACE, TECHNOLOGICALLY UPGRADED INDUSTRIES, SMART PARKING	AIR QUALITY IMPROVED, CLEAN TECHNOLOGY, UNDERGROUND SEWERAGE AND DRAINAGE, UPGRADATION OF SCHOOLS
HERITAGE AND CULTURAL PRECINCT - REVITALIZING THE RELIGIOUS IDENTITY OF THE CITY - DURGAMBIKA TEMPLE	CLEAR PEDESTRIANIZED ZONES, SAFE AND SOLAR PANELS ON STREET LIGHTS, SMART PARKING FACILITIES	CULTURAL CENTRE AND SPACE FOR FESTIVE ACTIVITIES	ACCOMODATION AND TRANSIT FACILITIES, PUBLIC GATHERING SPACES, CULTURALLY VIBRANT AREA, SOLAR PANEL STREET LIGHTS, INFORMATION KIOSKS AND WIFI SPOTS	SOCIO CULTURAL LEARNING CENTRES, PUBLIC UTILITIES, UNDERGROUND SEWERAGE AND DRAINAGE
ECONOMICAL PRECINCT - MANDIPET MARKET REDEVELOPMENT	NON MOTORIZED STREET, PEDESTRIAN FRIENDLY ZONES, SOLAR PANEL ROOF TOP ON KIOSKS	SKILL DEVELOPMENT CENTRE, OPEN SPACE USED FOR FOOD STREET	PUBLIC OPEN SPACE, TECHNOLOGICALLY UPGRADED HOSPITAL AND MARKETS, ECONOMIC REGENERATION, INTELLIGENT STREET LIGHTS, SMART PARKING FACILITIES	INNOVATIVE MEASURES FOR SOLID WASTE DISPOSAL, DEVELOPING THE EDUCATIONAL PREMISE
PAN CITY PROPOSAL - URBAN MOBILITY AND SMART INFRASTRUCTURE	WALKABLE, BICYCLE FRIENDLY CITY, SUSTAINABLE STREET DESIGN GUIDELINES, SAFETY GUIDELINES	STREET DESIGN ENGINEERING FOR ALL USERS	SMART INITIATIVES IN TRAFFIC MOVEMENT, SMART MOBILITY PLAN, CROWD MAPPING	GREEN INITIATIVES IN STREET DESIGN, USE OF GREEN SWALES, CONNECTING EDUCATIONAL INSTITUTIONS WITH BETTER TRANSPORT NETWORKS

GOAL	SUB GOALS
L iveable , Convenient & Safe	<ul style="list-style-type: none"> 24x7 Water Supply & Electricity Easy & Affordable clean public transport Intelligent Traffic Management Walkable & Bicycle Friendly City Sustainable
I nclusive	<ul style="list-style-type: none"> Slum Free City Affordable housing Planning for equitable growth Skill Development Safety for All
F inancially vibrant and Futuristic	<ul style="list-style-type: none"> Flexibility in planning Green spaces, Open Spaces Adaptive to new emerging technologies Improvement in Economic Engines - Trading, Food Processing
E nvironment Friendly	<ul style="list-style-type: none"> Comprehensive Solid Waste Management Improvement in Sanitation Reduction in Air Pollution Comprehensive Sewerage & Drainage Management
E du-tainment	<ul style="list-style-type: none"> Strengthen and developing the City as Education Hub Development of Entertainment Centres - Amusement Parks, Botanical Parks, Children Museum, Regional Science City etc Development of Multiplexes

PROPOSAL
RETROFIT FOR INNER CITY CORE (OLD CITY)
 Intervention Area : 3.2 Sq.Kms / 785 Acres



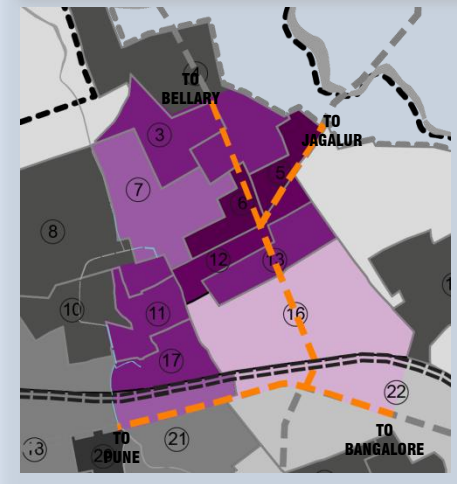
THE AREA CHOSEN FOR THE RETROFIT PROPOSAL IS IN THE INNER CITY CORE OF DAVANAGERE MAJORLY DOMINATED BY THE COMMERCIAL AREAS OF THE CITY.

THE PRECINCT AREA IS DELINEATED ABOVE THE NATIONAL HIGHWAY AND ALONGSIDE THE STATE HIGHWAYS PASSING THROUGH THE CITY.

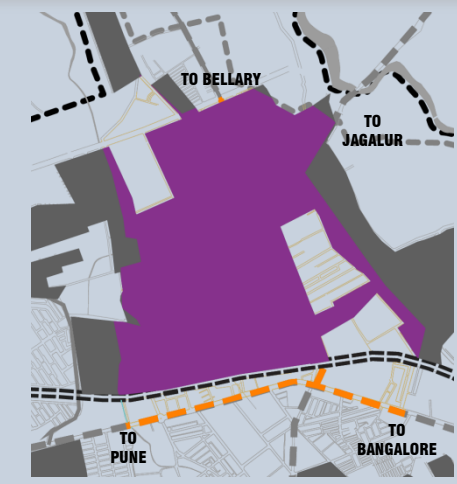


HOUSING

Out of 35 slums in DAVANAGERE, 27 slums are located in and around the intervention area. The density is maximum in these areas and are highly congested.



HOUSING DENSITY
 0-1000 1000-2500 2500-5000

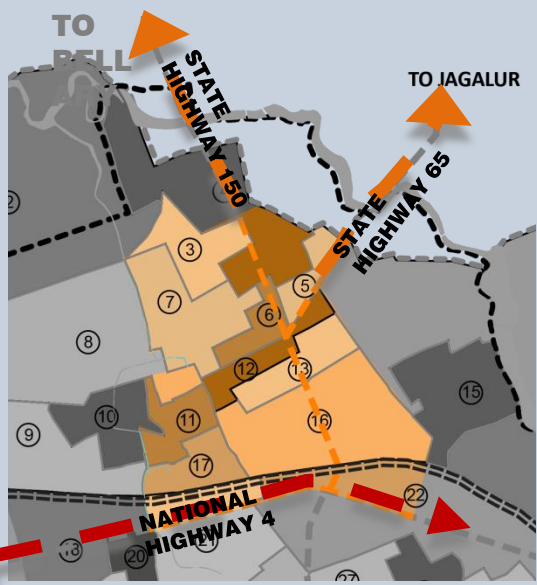


CONGESTED AREA
 5000-10000 10000-25000



SLUMS IN THE INTERVENTION AREA

ADMINISTRATIVE PROFILE

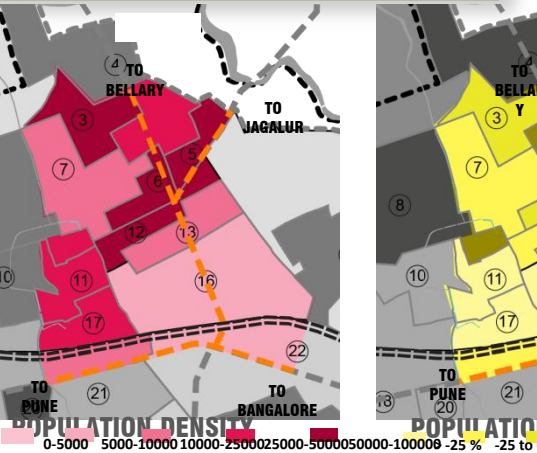


4.4% AREA OF THE CITY COVERED IN THE INTERVENTION AREA
26.6% POPULATION OF THE CITY RESIDES IN THIS AREA
24% HOUSEHOLDS OF THE CITY IN THE INTERVENTION AREA

Demographic Features (2011)	
Total Population (2011)	1,15,779
Area (km ²)	3.2 km ²
Av. Density (persons/km ²)	34,052
Total Households	22,622
Av. Household size	4.6

The intervention area includes major portion of district 2 and some portion district 1.

DEMOGRAPHIC PROFILE



WARD NUMBERS COVERED UNDER INTERVENTION AREA: 3,4,5,6,7,10,11,12,13,16,17 AND PORTIONS OF 8,9,18,20,21 & 23

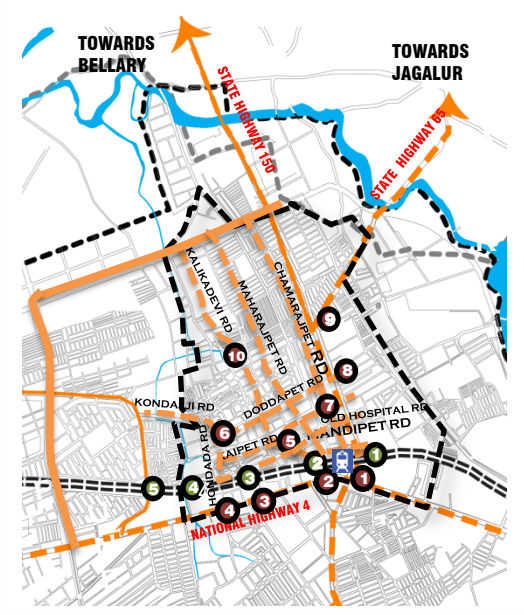
WARD NO. 8 AND 9 SHOWS HIGHEST POPULATION DENSITY AND HOUSEHOLD DENSITY

WARD NO. 7 AND 16 SHOWS LOWEST POPULATION DENSITY AND HOUSEHOLD DENSITY

WARD NO. 11 AND 16 HAVE FACED DECREASE IN POPULATION FROM 2001-2011 BY 20.8% AND 24.2% RESPECTIVELY.

WARD NO. 4 HAS FACED STEEP INCREASE IN POPULATION FROM 2001-2011 BY 133%.

ROAD NETWORK



- MAJOR JUNCTION WITHIN THE INTERVENTION AREA**
- 1.GANDHI JUNCTION
 - 2.HANUMANTHAPPA CIRCLE
 - 3.HIGH SCHOOL JUNCTION
 - 4.ARUNA JUNCTION
 - 5.CLOCK TOWER JUNCTION
 - 6.HONDADA CIRCLE
 - 7.MUNICIPAL MARKET JUNCTION
 - 8.AKKAMADEVI COLLEGE JUNCTION
 - 9.STATE HIGHWAY JUNCTION
 - 10.HAGEDIBBA CIRCLE

- ROB/RUB WITHIN THE INTERVENTION AREA**
1. RUB NEAR APMC MARKET LEVEL CROSSING AT GANDHI CIRCLE
 2. RUB NEAR MANDIPET JUNCTION
 3. RUB NEAR VASANTHA TALKIES JUNCTION
 4. RUB NEAR CHALVADI TALKIES JUNCTION
 5. RUB NEAR FOREST DEPARTMENT OFFICE

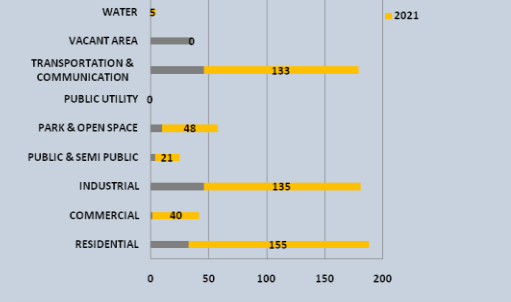
- MAJOR ROADS WITHIN THE INTERVENTION AREA**
- 1.PB ROAD (NH 4)
 - 2.K.R.ROAD (SH150)
 - 3.MANDIPET ROAD
 - 4.KAIPET
 - 5.OLD HOSPITAL ROAD
 - 6.DODDAPET ROAD
 - 7.CHAMARAJPET ROAD
 - 8.MAHARAJAPET ROAD
 - 9.KALIKADEVI ROAD
 10. HONDADA RAD

THE URBAN SPRAWL IN DAVANAGERE HAS TAKEN PLACE IN ALMOST ALL THE DIRECTIONS, HOWEVER A GREATER THRUST HAS BEEN OBSERVED IN URBANIZATION OF THE NORTHERN, NORTH WESTERN, NORTH EASTERN AND ALSO IN THE SOUTH EASTERN SUBURBS OF THE CITY.

LANDUSE

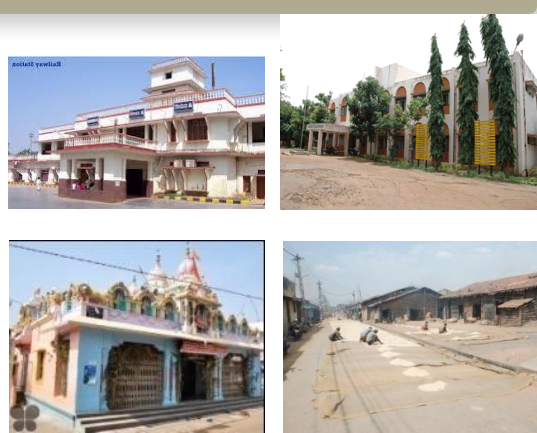
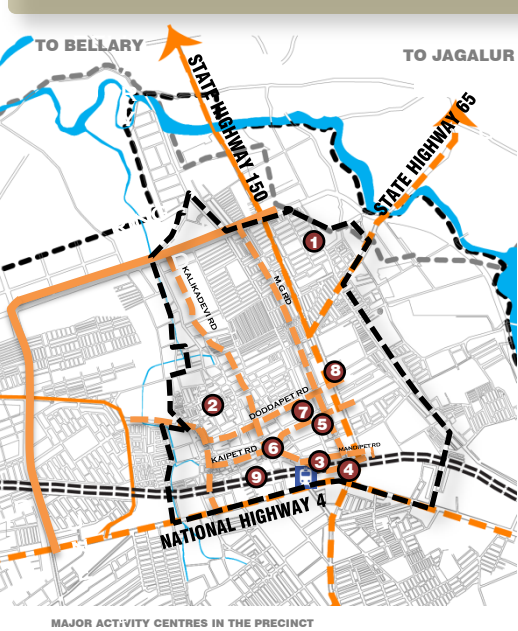


LANDUSE COMPARISON - 2004 & 2021



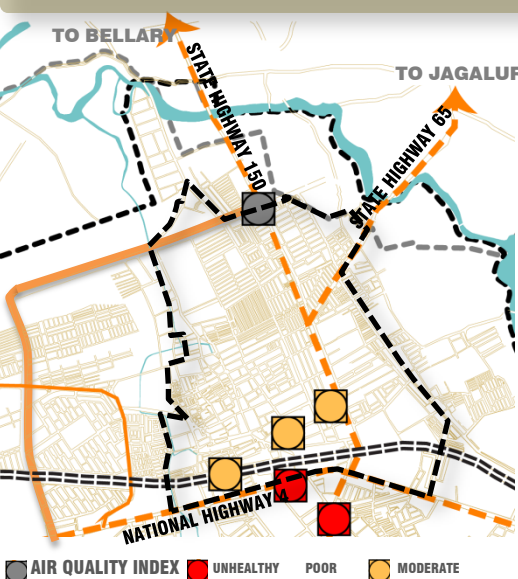
TOTAL AREA - 785 ACRES (3.18 sq.kms.) STEEP INCREASE IS OBSERVED IN RESIDENTIAL, COMMERCIAL, INDUSTRIAL & OPEN SPACE LACK OF PUBLIC UTILITY AREAS.

KEY ACTIVITY CENTRES IN THE STUDY AREA



- 1. MANDAKKI BHATTI
- 2. DURGAMBIKA TEMPLE
- 3. RAILWAY STATION
- 4. OLD BUS STAND
- 5. GOVT. HOSPITAL
- 6. CLOCK TOWER
- 7. MUNICIPAL MARKET
- 8. AKKAMADEVII COLLEGE
- 9. MANDIPET

AIR QUALITY INDEX

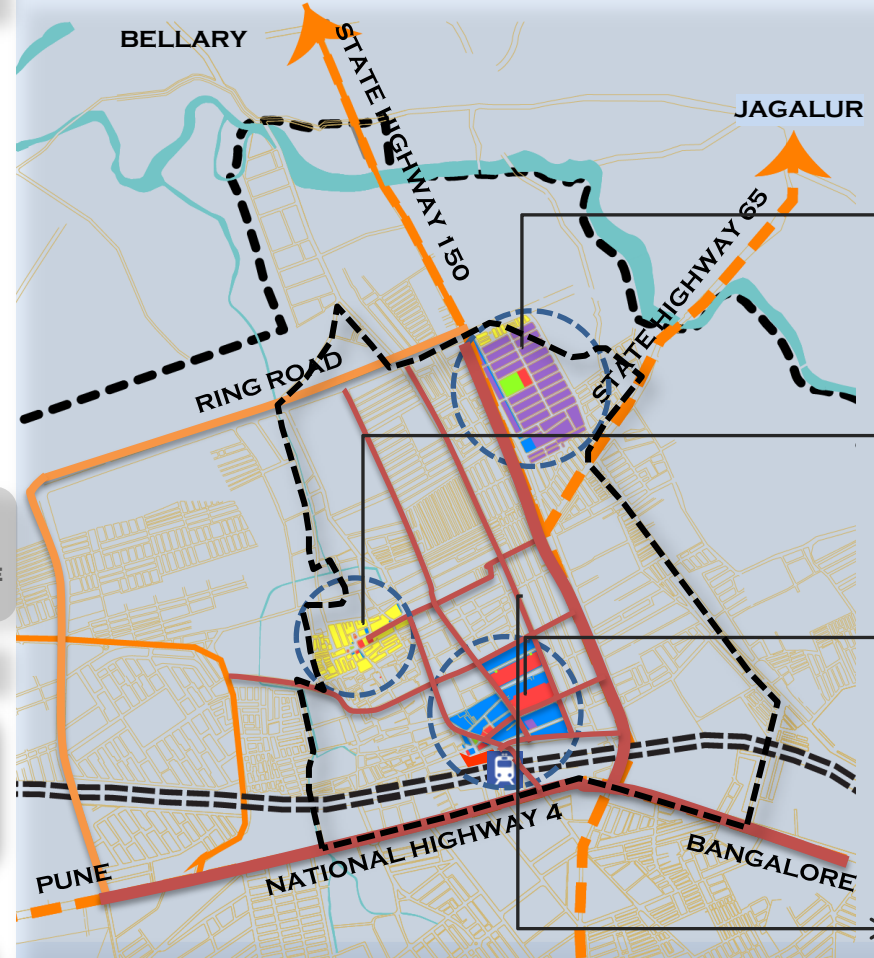


THE AIR QUALITY INDEX IN THE MANDAKKI BHATTI IS 347.2 AND THE LEVEL OF HEALTH CONCERN IS HAZARDOUS. WHEREAS IN THE CLOCK TOWER AREA THE AIR QUALITY INDEX IS 61.99 WHICH IS AT MODERATE LEVEL OF HEALTH CONCERN.

THE ATMOSPHERE IS POLLUTED IN MANY PARTS OF DAVANAGERE CITY SUCH AS AZAD NAGAR AND MANDAKKI BHATTI OWING TO THE PRESENCE OF PUFFED RICE FACTORIES AND MOVEMENT OF HEAVY GOODS VEHICLES AND PRESENCE OF HUNDREDS OF GODDOWNS.

THE HIGH SPM LEVELS LEAD TO THE PROLIFERATION OF FUNGI LIKE ASPERGILLUS WHICH CAUSE BREATHING PROBLEMS, SKIN AND LUNG DISEASES.

THE SPM IN DAVANAGERE, PARTICULARLY ON THE PB ROAD STRETCH, WAS 296 DURING 2005-06 AND 382.71 THE PREVIOUS YEAR.



SMART NETWORK

SMART MOBILITY

SMART INFRASTRUCTURE

SMART ENERGY

SMART TECHNOLOGY

SMART WASTE MANAGEMENT

SOCIO-ECONOMIC PRECINCT - MANDAKKI MARKET



REDEVELOPMENT OF 75 ACRES MANDAKKI MARKET WITH ADVANCED MANUFACTURING PROCESS AND INCLUSIVE HOUSING AND SOCIAL INFRASTRUCTURE - BETTER QUALITY OF LIFE TO MORE THAN 75000 PEOPLE - DIRECTLY AFFECTING 18% OF THE CITY POPULATION

CULTURAL & HERITAGE PRECINCT - DURGAMBIKA TEMPLE



REVITALIZING THE 200 YEAR OLD RELIGIOUS IDENTITY OF THE CITY - DURGAMBIKA TEMPLE & ITS SURROUNDING AS HERITAGE & CULTURAL PRECINCT OF THE CITY - DEFINING & SHOWCASING THE URBAN HERITAGE OF THE CITY.

ECONOMIC PRECINCT - MANDIPET MARKET



REDEVELOPING THE EXISTING MANDIPET MARKET & ITS SURROUNDING AS A VIBRANT ECONOMIC CENTRE FOR THE CITY - ADDING MORE RETAIL, COMMERCIAL, & PARKING SPACES

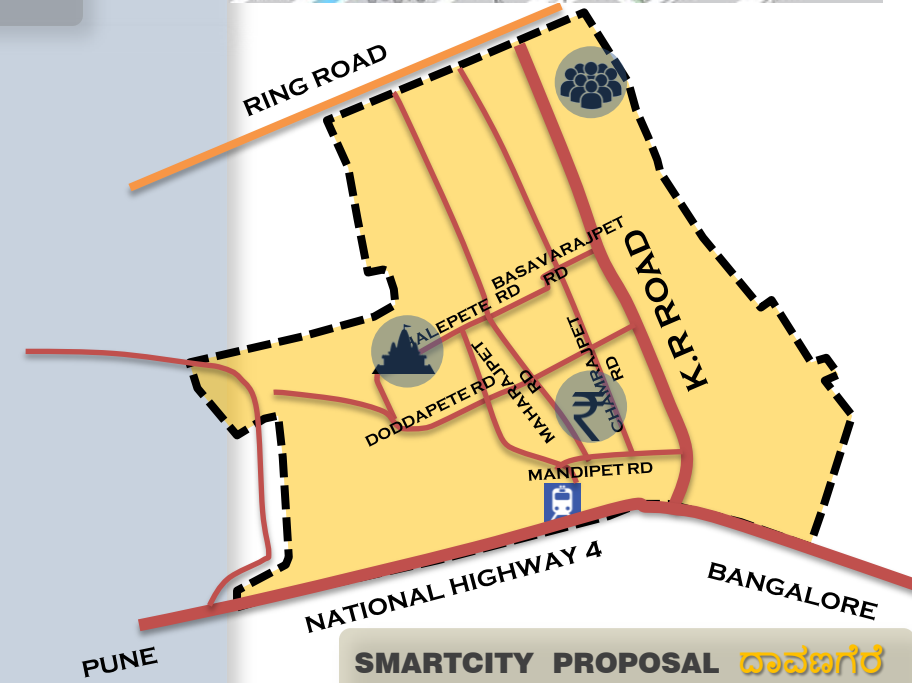
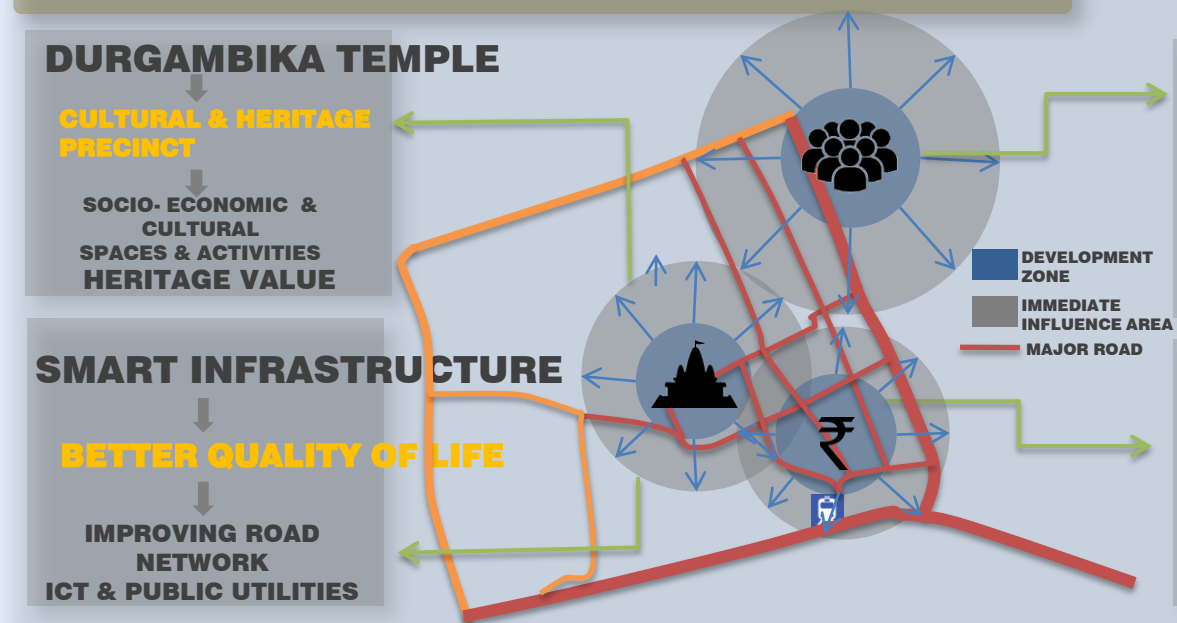
PHYSICAL INFRASTRUCTURE - SMART INFRASTRUCTURE



AN OVERHAUL OF THE INFRASTRUCTURE LINKING THE THREE SELECTED PRECINCTS - AN OVERALL DEVELOPMENT OF THE INNER CITY CORE . USE OF SMART TECHNOLOGY FOR PUBLIC UTILITIES & INFRASTRUCTURE, THUS IMPROVING THE QUALITY OF LIFE

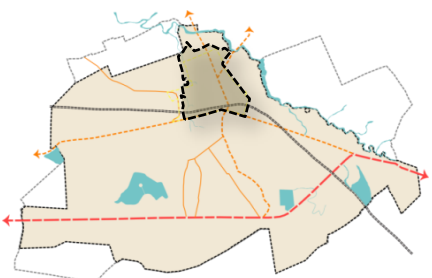


MAJOR NODES WITHIN THE INTERVENTION AREA

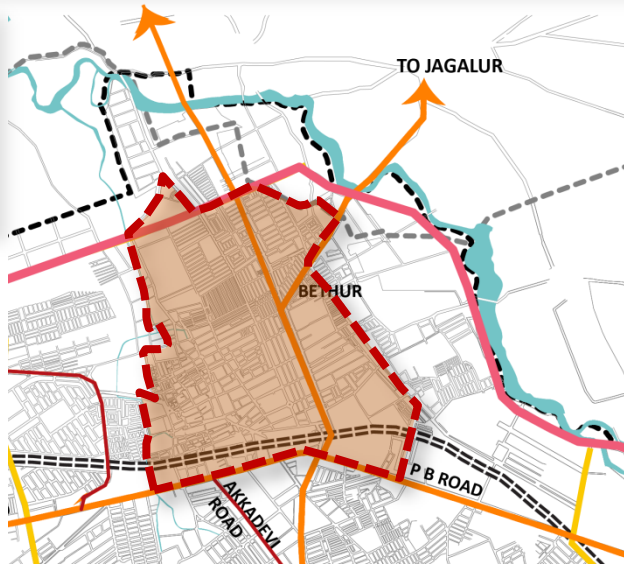


OVERALL 785 ACRES INTERVENTION

PROPOSAL
RETROFIT FOR INNER CITY CORE (OLD CITY)
 INTERVENTION AREA :
3.2 Sq.Kms / 785 Acres

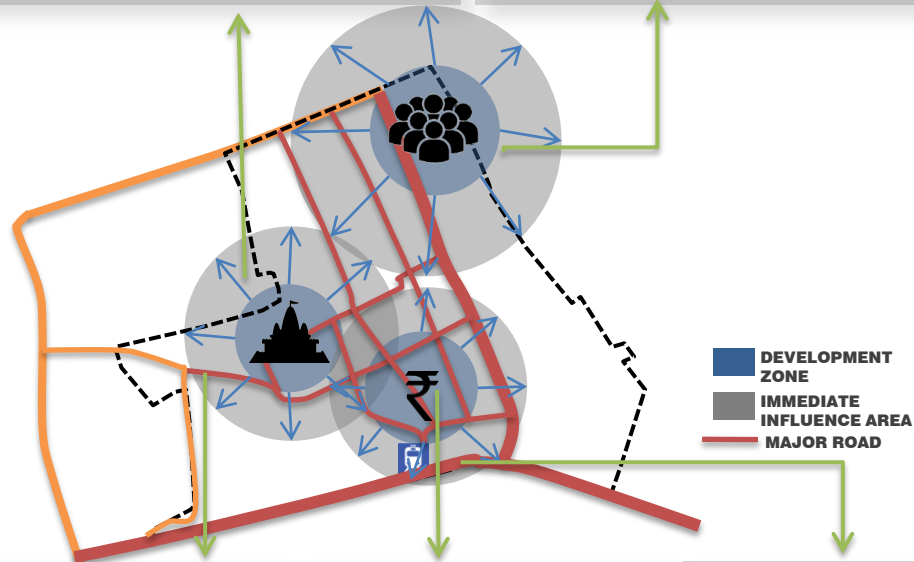


KEY MAP



MAP SHOWING INTERVENTION AREA

<p>DURGAMBIKA TEMPLE AREA</p> <p>CULTURAL & HERITAGE PRECINCT</p> <p>↓</p> <p>SOCIO- ECONOMIC & CULTURAL SPACES & ACTIVITIES HERITAGE VALUE</p>	<p>MANDAKKI BATTI REDEVELOPMENT</p> <p>LIVE+WORK+PLAY</p> <p>↓</p> <p>RE- ENERGIZE & REVIVE SME'S USE OF NEW TECHNOLOGY INCREASED PRODUCTIVITY INCLUSIVE HOUSING IMPROVISING THE ECONOMY</p>
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<p>SMART INFRASTRUCTURE</p> <p>↓</p> <p>BETTER QUALITY OF LIFE</p> <p>↓</p> <p>IMPROVING ROAD NETWORK ICT & PUBLIC UTILITIES</p>	<p>MANDIPET MARKET</p> <p>↓</p> <p>ECONOMIC HUB</p> <p>↓</p> <p>RE-VITALIZATION OF THE ECONOMIC PRECINCT NEW LEASABLE RETAIL & COMMERCIAL SPACES REGENERATED GREEN PLAY GROUND</p>	<p>OLD BUS STAND REDEVELOPMENT</p> <p>↓</p> <p>CENTRAL TRANSIT HUB</p> <p>↓</p> <p>COMMAND CENTRE ECONOMY GENERATION BY COMMERCIAL SPACES</p>
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ALL INFRASTRUCTURE AND ICT INTERVENTIONS TO BE REPLICATED THROUGHOUT THE CITY FOR A WHOLESOME DEVELOPMENT

KEY COMPONENTS OF THE 785 ACRES INTERVENTION:

1. URBAN MOBILITY:

- ENGINEERINGLY AND AESTHETICALLY DESIGNED **ROAD DESIGN & NETWORK**
- REVITALIZED AND **EFFICIENT NMT NETWORK.**
- PROVISIONS FOR **ON STREET AND OFF STREET PARKING ZONES AND MLCP'S.**
- RE-DESIGN OF **INTERSECTION / JUNCTIONS**
- **ENHANCED BUS CONNECTIVITY & EFFICIENCY**
- **RE-DEVELOPMENT OF THE EXISTING OLD BUS TERMINAL INTO STATE-OF THE ART CENTRAL TRANSIT HUB AND CENTRAL CONTROL & COMMAND CENTRE**



EXISTING SECTION OF K.R. ROAD



PROPOSED SECTION OF K.R. ROAD WITH ALL THE PROPOSED INTERVENTIONS

2. CONVERGENCE FROM PAN CITY - ICT INITIATIVES:

- INTELLIGENT **SOLAR POWERED STREET LIGHTS**
- INTELLIGENT TRAFFIC MANAGEMENT SYSTEM
- ICT **RETRO-FIT TO BUS STOPS**
- PROVISION OF **INFORMATION KIOSKS AND HOT- SPOTS AT STRATEGIC LOCATIONS**

GREEN INITIATIVES

- **USE OF BIO DEGRADABLE WASTE IN COMPOST**
- **USE OF NON BIODEGRADABLE WASTE IN ROAD CONSTRUCTION**
- **USE OF WASTE PLASTIC MIXED WITH BITUMEN TO MAKE ROADS**
- **INCREASED STRENGTH AND PERFORMANCE OF ROADS**
- **GENERATE JOBS FOR RAG PICKERS**
- **RESIST THE PERMEATION OF WATER AND COLD CRACKING**
- **ECO FRIENDLY**



3. UTILITY INFRASTRUCTURE:

- **MOVING ALL UTILITY LINES AND WIRING UNDERGROUND.**
- **ASSURED 24 X 7 ELECTRICITY AND WATER SUPPLY.**
- **INITIATING A BIN-LESS SOLID WASTE MANAGEMENT SYSTEM**
- **100% DOOR TO DOOR PRIMARY COLLECTION SYSTEM OF SEGREGATED WASTE.**



PROPOSED ROAD SECTION OF PB ROAD SHOWING UNDERGROUND UTILITY DUCTS



ILLUSTRATION : UNDERGROUND UTILITIES



BIN-LESS SOLID WASTE MANAGEMENT SYSTEM



MANDIPET MARKET REDEVELOPMENT

INTENT



PROPOSED STRATEGIES

PLANNING STRATEGIES

- AMALGAMATING MUNICIPAL MARKET, OLD GOVT. HOSPITAL, PLAY GROUND AND SCHOOL - WHOLISTIC SPACE
- GREEN OPEN SPACE ACCESSIBLE TO PUBLIC
- CONNECTING MLCP TO RAILWAY STATION
- CREATING PUBLIC PLAZA AROUND THE CLOCK TOWER

ECONOMY GENERATION STRATEGIES

- REVENUE GENERATION FROM PARKING AND ORGANISED COMMERCIAL SPACES
- BICYCLE SHARING PODS, MULTILEVEL PARKING FACILITY
- VIBRANT ECONOMIC HUB
- SMART BUILDING WITH RETAIL & OFFICE SPACE ABOVE MUNICIPAL MARKET

ICT STRATEGIES

- SENSOR BASED INTELLIGENT STREET LIGHTS
- SOLAR PANELS ON 1.6 LAC SQ.FT. OF ROOF TOP
- KIOSKS WITH SOLAR PANELS
- SENSOR BASED DUST BINS PROVIDED FOR ORGANIZED SOLID WASTE DISPOSAL

SOCIAL STRATEGIES

- FOOD STREET PUBLIC ZONE EMPLOYMENT OPPORTUNITIES
- PEDESTRIAN ZONES - BETTER STREET DESIGNS
- UPGRADATION IN MEDICAL FACILITIES
- PROVIDING DIGITAL LIBRARY, KNOWLEDGE CENTRE IN SCHOOL

EXISTING ISSUES

- HEAVY TRAFFIC ROADS ARE CHOKED POOR ROAD INFRASTRUCTURE
- ON STREET SOLID WASTE DISPOSAL
- ON STREET VENDORS
- ON STREET VEHICLE PARKING NO PARKING SPACES ALLOTTED
- UNORGANIZED MARKET SPACE MUNICIPAL MARKET AREA UNDER-UTILIZED



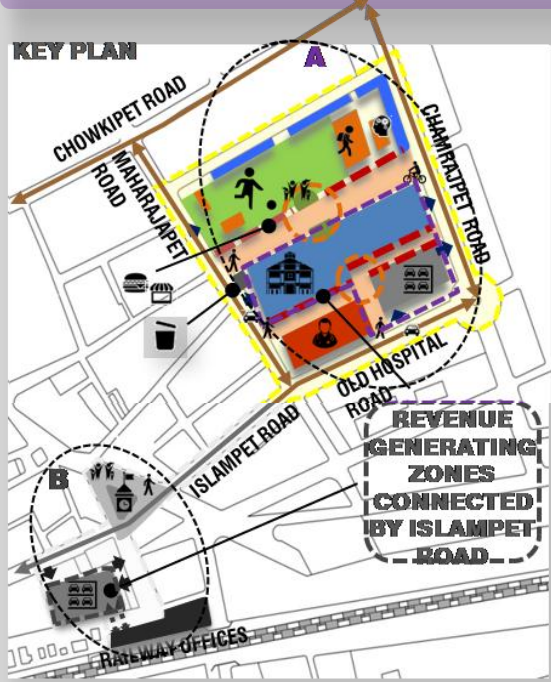
IMPACT OF PROPOSED INTERVENTIONS

- EXISTING**
- UNORGANIZED 300 RETAIL SHOPS
- OLD GOVT.HOSPITAL
- HAPHAZARD STREET PARKING
- ON STREET VENDORS
- OPEN SPACE - UNACCESSIBLE
- NO ORGANIZED LEASABLE AREA

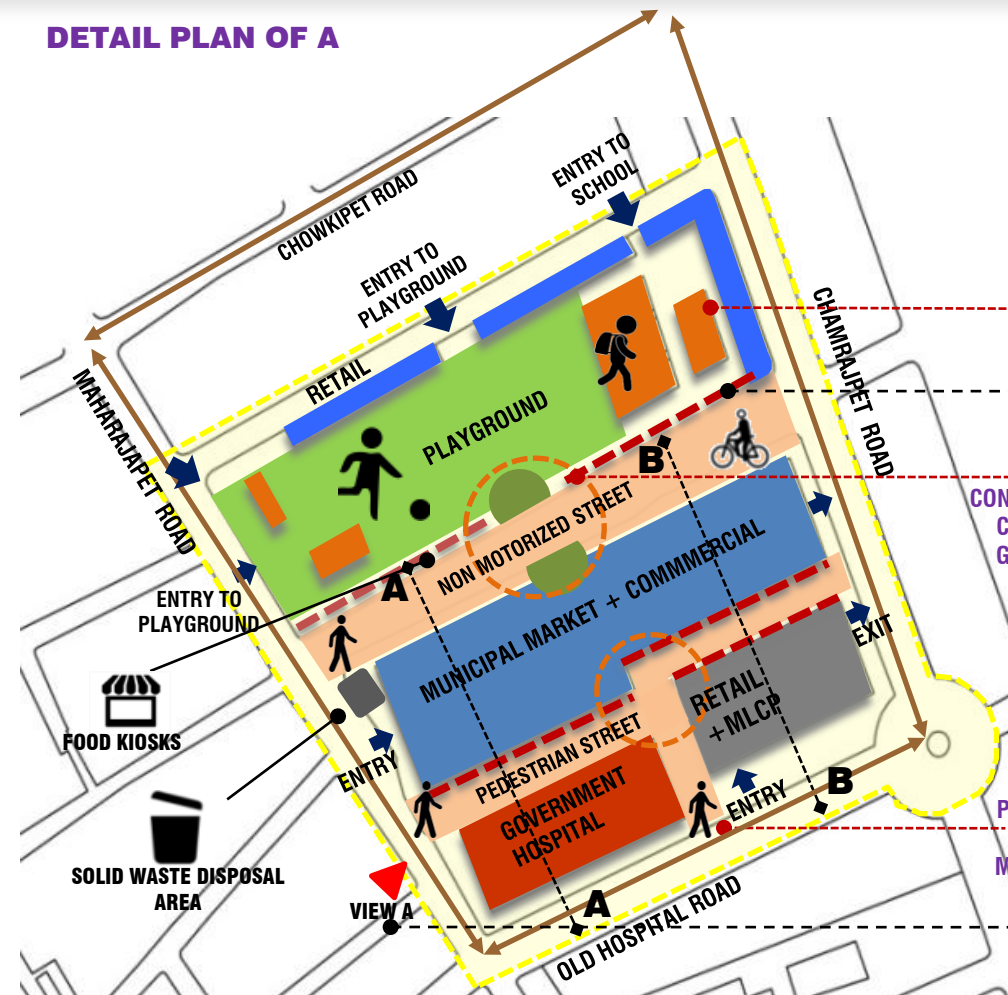
3500 NEW JOBS CREATED IN THE MANDIPET MARKET PRECINCT.
100 CRORES - ECONOMIC CAPACITY EXPANSION

- PROPOSED**
- 65,000 SQ.FT. OF LEASEBLE RETAIL SHOPS PROVIDED
- 100 BED HOSPITAL OF 1 LAC SQ.FT. PROVIDED WITH UPGRADED TECHNOLOGIES
- 1.5 LAC SQ.FT. MULTILEVEL PARKING PROVIDED FOR 300 CAR SPACES AND 2800 TWO WHEELERS
- 90,000 SQ.FT. MUNICIPAL MARKET AREA PROVIDED WITH ALL UTILITIES AND FACILITIES
- DEFINED ACCESS TO THE GREEN SPACE, UPGRADED EQUIPMENTS
- 2.6 LAC SQ.FT. NEW LEASABLE AREA PROVIDED

MANDIPET MARKET REDEVELOPMENT



DETAIL PLAN OF A



KNOWLEDGE CENTRE AND LIBRARY

CENTRAL CONGREGATION SPACE CONNECTING THE GREEN AREA AND MARKET

PEDESTRIAN ENTRY TOWARDS MUNICIPAL MARKET



FOOD KIOSKS / PEDESTRIAN STREET

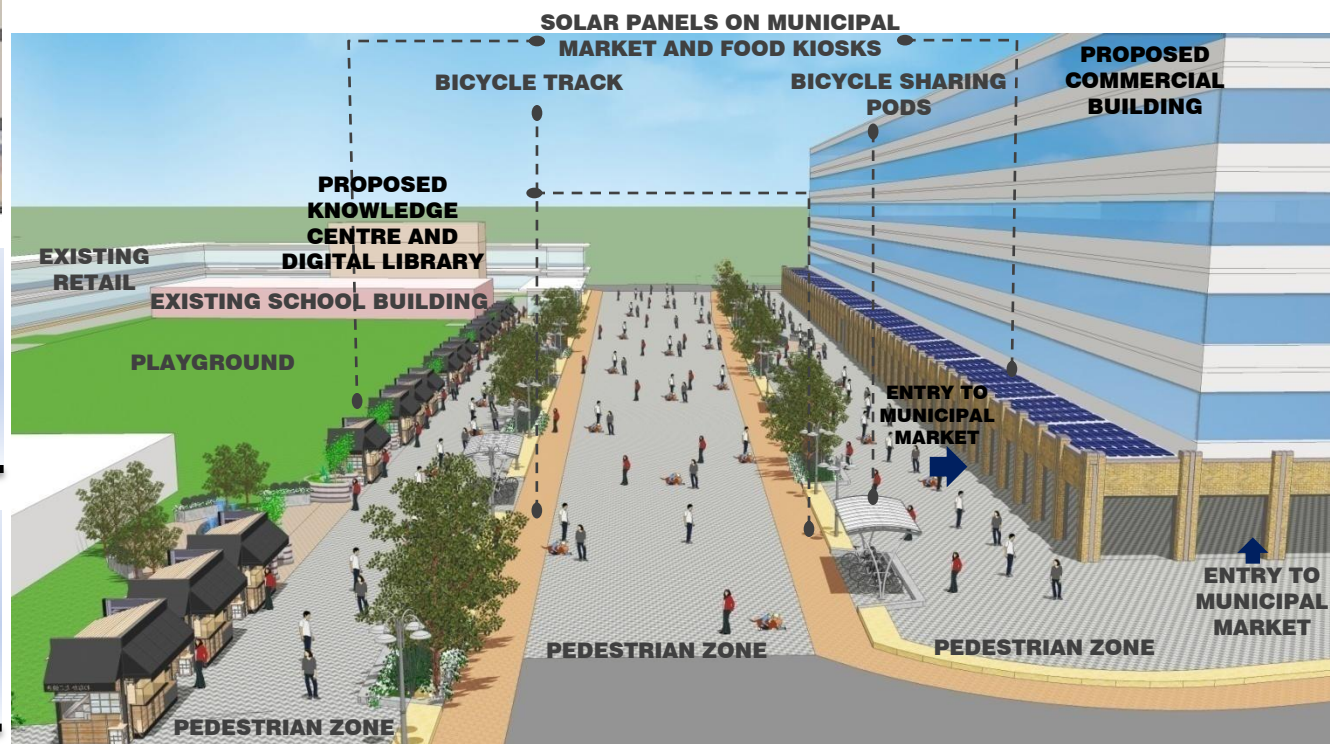
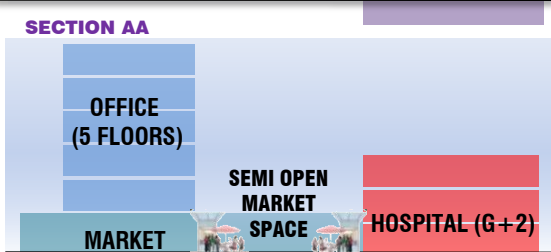
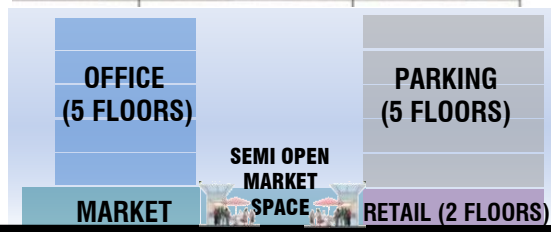


VIEW A - SHOWING THE PEDESTRIAN STREET MARKET CREATED BETWEEN THE HOSPITAL AND MUNICIPAL MARKET. THE STREET CONNECTS THE PEDESTRIANS DIRECTLY FROM M.G. ROAD TO CHAMRAJPET ROAD

1. AMALGAMATING THE MUNICIPAL MARKET AND GOVERNMENT HOSPITAL PLOTS AND ADDING A MULTI LEVEL CAR PARK IN THE SAME LAND PARCEL

- INTERVENTION AREA
- NON MOTORIZED STREET
- MLCP + COMMERCIAL
- GOVERNMENT HOSPITAL
- EXISTING RETAIL
- KIOSKS
- EXISTING SCHOOL
- PUBLIC PLAZA
- SOLID WASTE DISPOSAL SPACE
- SECTION LINE
- KNOWLEDGE CENTRE + LIBRARY

PROPOSED SECTIONS

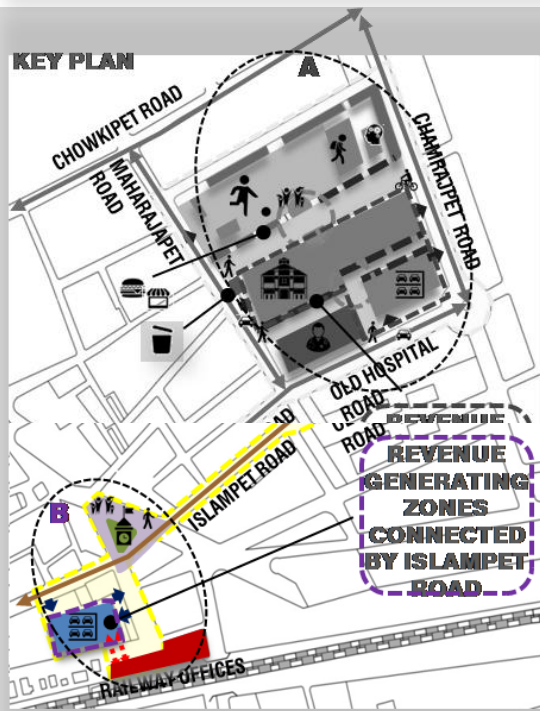


BICYCLE SHARING PODS



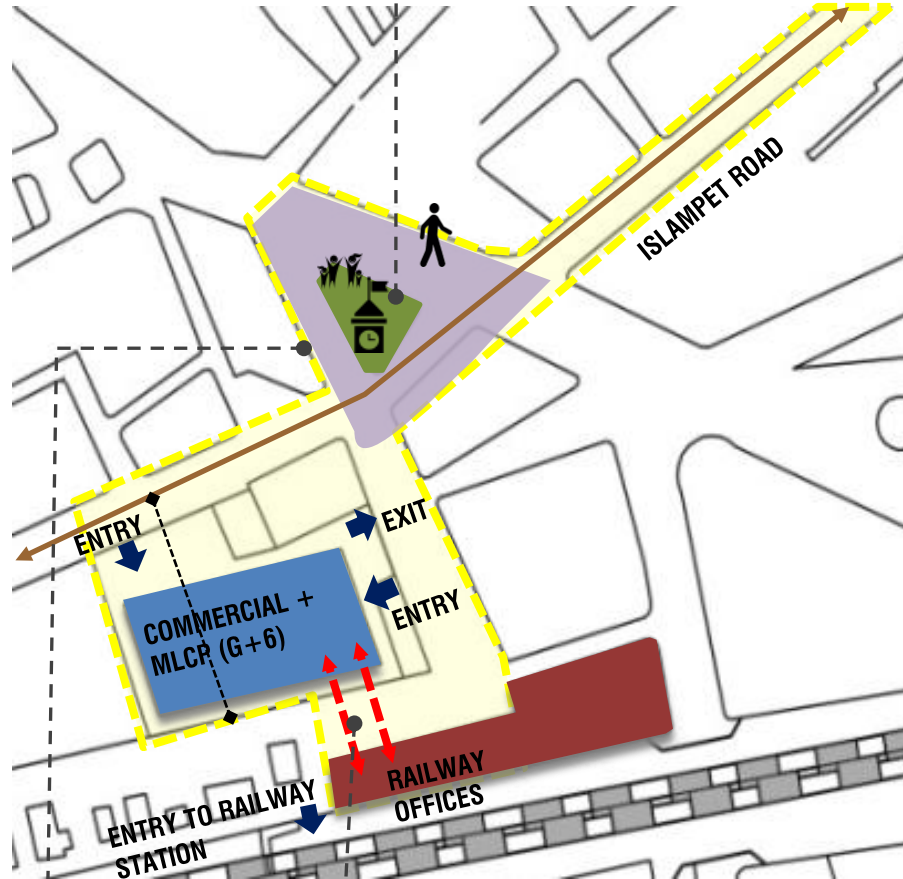
PUBLIC PLAZA CONNECTING THE MARKET AND FOOD KIOSKS

MANDIPET MARKET REDEVELOPMENT



ENHANCING THE EXISTING GREEN AREA AROUND THE CLOCK TOWER ALONGWITH THE PLAZA CREATED AROUND IT.

DETAIL PLAN OF B



THE REAR ENTRY TO THE RAILWAY STATION FROM VIJAY LAKSHMI ROAD ENHANCED AND CONNECTED TO THE PROPOSED MLCP AND COMMERCIAL BUILDING FOR PUBLIC USE.

- COMMERCIAL
- COMMERCIAL
- COMMERCIAL
- PARKING
- PARKING
- PARKING

ROAD COMMERCIAL PARKING

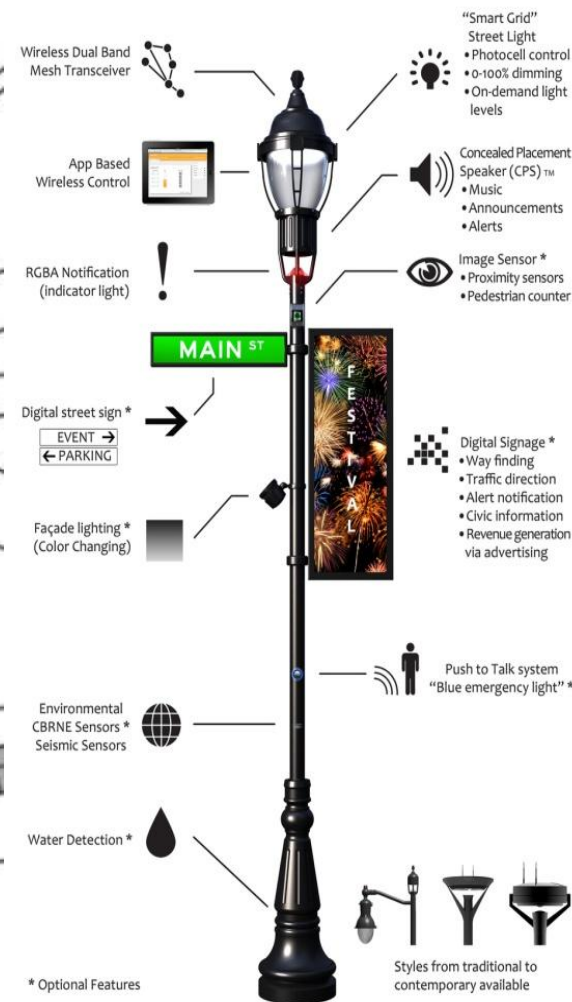
PROPOSED SECTION THROUGH COMMERCIAL AND MLCP BUILDING REFERENCE IMAGES



CREATING A PUBLIC PLAZA AROUND THE CLOCK TOWER IN THE CORE COMMERCIAL AREA AS A VIBRANT PUBLIC SPACE

ICT INTERVENTIONS

INTELLIGENT STREET LIGHTS



STREET LIGHTS WITH DIGITAL DISPLAY BOARDS AND SOLAR PANELS



SMART PARKING INITIATIVES - BICYCLE SHARING PODS

KIOSKS WITH SOLAR PANEL ROOF TOP



SENSOR BASED WASTE COLLECTION BINS



SENSORS INSTALLED INSIDE CONTAINERS TO MONITOR THE FILL LEVEL. DATA SENT TO CONTROL CENTRE ENABLING OPTIMAL MANAGEMENT OF COLLECTION.

PAVEGEN TILES INSTALLED IN PEDESTRIAN ZONES



THE RECYCLED RUBBER "PAVEGEN" PAVING SLABS HARVEST KINETIC ENERGY FROM THE IMPACT OF PEOPLE STEPPING ON THEM AND INSTANTLY DELIVER TINY BURSTS OF ELECTRICITY.

MANDAKKI BHATTI RETROFIT

INTENT

MANDAKKI MARKET RETRO - FIT AS A PROTOTYPE

SUSTAINING THE SMALL SCALE INDUSTRIES IN DAVANGERE

PUFFED RICE INDUSTRY
GARMENTS INDUSTRY
FABRICATION AND GENERAL
ENGG CLUSTER
SUPPORTING INDUSTRIES

75 ACRES



INCREASE IN ENTREPRENEURSHIP, JOB OPPORTUNITY & ECONOMIC GROWTH

SKILL DEVELOPMENT CENTRE

OVERALL QUALITY OF LIFE

EXISTING SCENARIO

 PUFFED RICE INDUSTRY 810 UNITS	 75 ACRES THE INTERVENTION AREA - IN WARD 4 & DISTRICT 2 75 ACRES	 5000 EMPLOYEES & 20000 INDIRECT EMPLOYMENT 5/6 EMPLOYEES PER UNIT	 116 CRORES ANNUAL TURN OVER 30-35 LAKH PER DAY	 AGRICULTURIST-PADDY 95% SUPPLY TO KARNATAKA	 MANDAKKI BHATTI
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IMPACT OF PROPOSED INTERVENTIONS

 ANNUAL TURN OVER ENHANCED BY 60-65 %	 INCREASE IN JOBS ENTREPRENEURSHIP	 SOLAR PANELS 11,00,000 SQ.FT OF ROOF TOP PRODUCING 8-10 MW	 40% ENERGY SAVING	 3.5 KM OF DEDICATED NMT LANES	 6 ACRES OF OPEN GREEN SPACE	 AFFORDABLE HOUSING FOR SLUMS UNDER "HOUSING FOR ALL" SCHEME	 CLEAN & SMART INDUSTRIES
6075 ADDITIONAL JOBS CREATED IN THE MANDAKKI BHATTI.							
190 CRORES ECONOMY GENERATION THROUGH INTERVENTION.							

EXISTING ISSUES

AIR & LAND POLLUTION
AIR QUALITY INDEX IN THE MANDAKKI BHATTI IS 347.2



28% OF THE PEOPLE IN THE AREA HAVE HEALTH ISSUES

MORE THAN 6000 CHILDREN SUFFER FROM ANAEMIA IN THE CITY & CHILD LABOUR

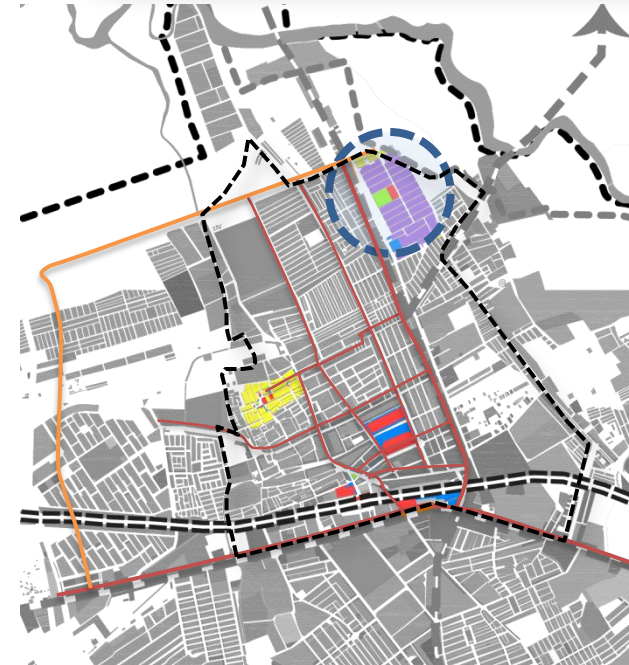


SWM ,WATER & SANITTATION ISSUES

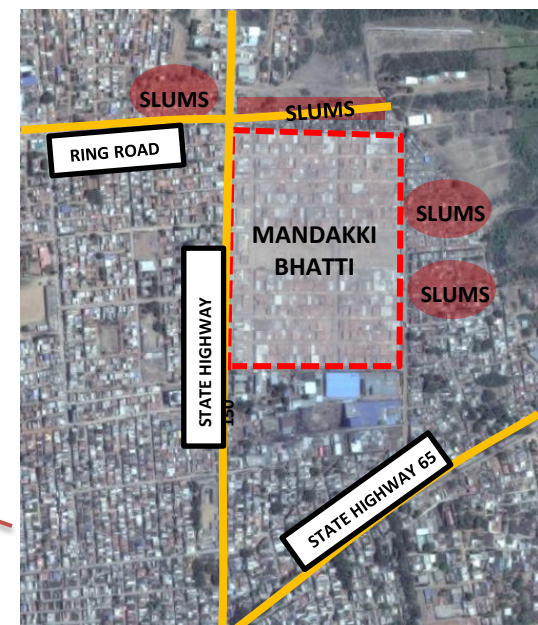
HIGH DENSITY & CONGESTED AREA - UNHYGIENIC & POOR QUALITY OF LIFE



10% POPULATION IN **1.5%** AREA OF THE CITY



LOCATION MAP



AREA PLAN

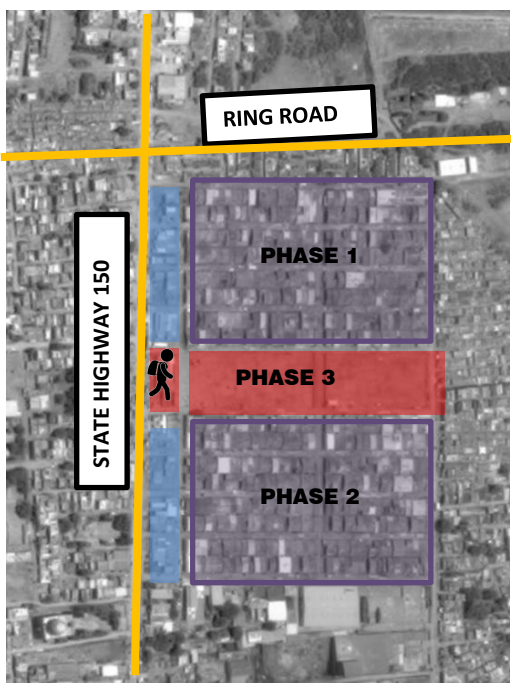
Davanagere is famous for its "Mandakki Bhattis" (puffed-rice factories). But while most textile mills have closed down, the Mandakki bhattis are flourishing against all odds. This activity is not commonly found across regions but confined to only certain locations. Puffed rice making involves largely skill based processes and therefore requires minimal equipment.

MANDAKKI BHATTI RETROFIT

INTERVENTION

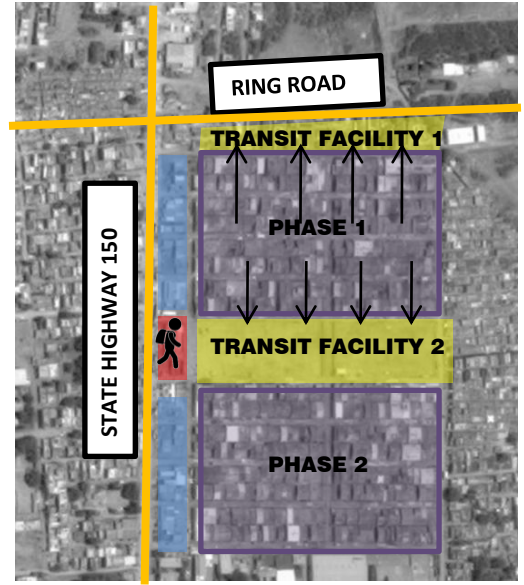
1 RETRO-FITTING 75 ACRES

- MANDAKKI BHATTI IN 3 PHASES .
- RETROFIT/REDEVELOPING INDIVIDUAL UNIT



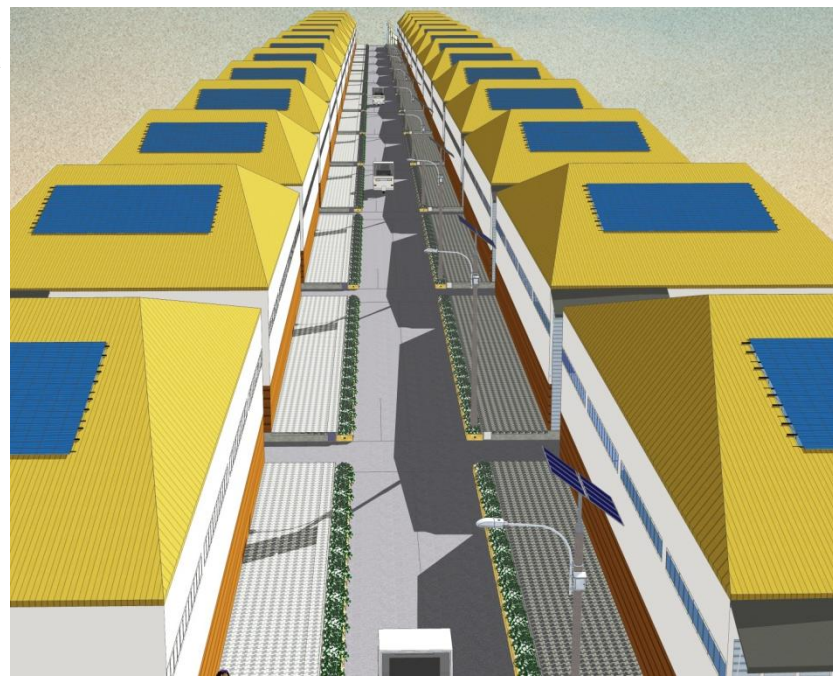
2 PROVIDING TRANSIT FACILITIES

SHIFTING THE DILAPIDATED UNITS IN PHASES TO TRANSIT FACILITIES & RETROFITTING OTHER UNITS. THE UNITS SHIFTED TO TRANSIT ZONE SHARE THE FACILITIES & OPERATE IN TWO SHIFTS. (CITIZENS HAVE GIVEN CONSENT FOR THE SAME).



3 SETTING UP THE INDUSTRIAL UNIT

- PROVIDING UNITS BUILT WITH PART MASONRY & INDUSTRIAL SHED WITH MANDATORY VENTILATION SHAFT & SOLAR PANEL



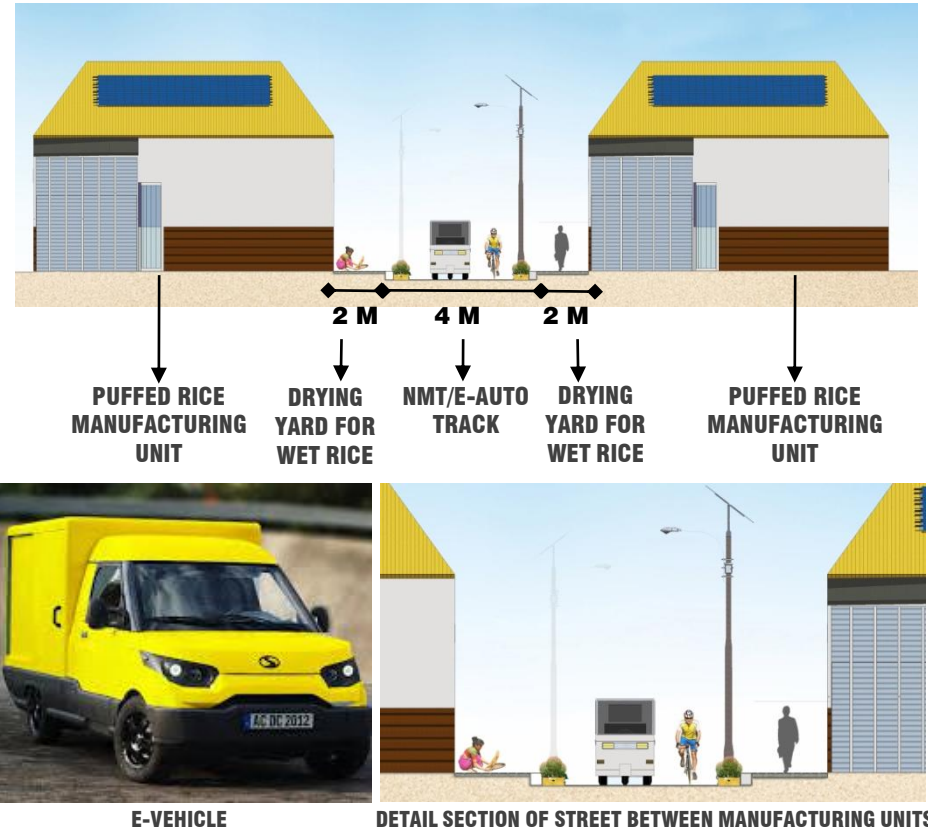
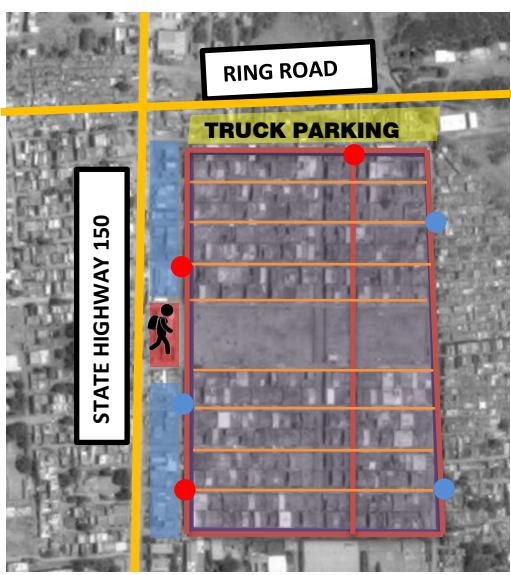
4 PROVIDING CLEAN TECHNOLOGY

- PROVIDING ADVANCED & CLEAN PUFFED RICE MAKING MACHINES WITH SUBSIDIES.
- REPLACING THE FURNACE WITH ELECTRICAL FURNACE & CHIMNEYS



5 PROPOSED CIRCULATION SYSTEM

- MAIN ENTRY TO THE BHATTI LAYOUT.
- VEHICULAR ACCESS WITHIN THE LAYOUT
- NMT/ E- AUTO TRACKS WITHIN THE LAYOUT



6 SETTING UP ADVANCED TECHNOLOGY

- INDUSTRIAL SENSORS WITH POLLUTION CHECK METERS
- WASTE SEGREGATION & PROCESSING CENTRE
- DIGITAL LIBRARY, SKILL DEVELOPMENT CENTRE & ENGINEERING SERVICE CENTRE
- WIFI CONNECTIVITY
- SOLAR ENERGY



ILLUSTRATION: SKILL DEVELOPMENT CENTRE



PLAY GROUND FOR THE COMMUNITY – WITHIN THE BHATTI LAYOUT

● ELECTRIC VEHICLE STANDS ● BICYCLE PODS

E-VEHICLE

DETAIL SECTION OF STREET BETWEEN MANUFACTURING UNITS

MANDAKKI BHATTI RETROFIT



PROPOSAL - PHASE 1



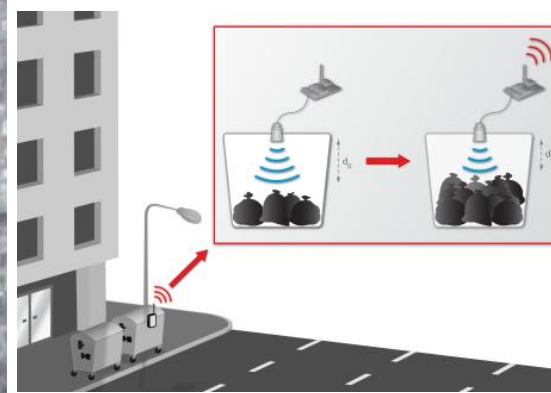
PROPOSAL - PHASE 2



PROPOSED PLAN OF INTERVENTION AREA



STORM WATER DRAIN



SOLID WASTE MANAGEMENT SENSOR



DIGITAL DISPLAY WIFI CONNECTIVITY



VEHICULAR CHARGING POINTS



SOLAR STREET LIGHT WITH SENSOR WITHIN THE AREA
INTELLIGENT STREET LIGHT WITH SENSOR

SPATIAL

BHATTI RETROFITTING 75 ACRES OF MANDAKKI BHATTI

BHATTI STRENGTHENING THE ROAD NETWORK TO THE MARKET & ITS SURROUNDING

PHASING DEVELOPING THE MARKET IN THREE PHASES - PROVIDING TRANSIT FACILITIES TO THE EXISTING INDUSTRIES

UPGRADING THE SCHOOL'S OPEN SPACE & PLAYGROUND. PROVIDING SKILL DEVELOPMENT CENTRE & ENGINEERING SERVICE CENTRE

DEDICATED FACILITIES PARKING

TECHNOLOGY

ADVANCE TECHNOLOGY FOR MANUFACTURING

FIBRE-OPTIC TELECOMMUNICATIONS ELECTRICITY NETWORK

SOLAR PANELS

CONTROL OF LIGHTING ZONES LED TECHNOLOGY

SKILL DEVELOPMENT

WIFI FACILITIES DIGITAL LIBRARY

STREET SENSORS FOR POLLUTION CHECK, METERING

WASTE COLLECTION SYSTEM

BICYCLE SHARING SMART PARKING E-AUTOS

SOCIAL

SLUM UPGRADATION - INCLUSIVE HOUSING

COMMUNITY OPEN SPACE - SKILL & ENTREPRENEUR DEVELOPMENT CENTRE

HEALTH & FITNESS FOR ALL - DUE TO CLEAN TECHNOLOGY

COMMUNITY GATHERING SPACE BETTER QUALITY OF LIFE

ECONOMIC

ADVANCE & CLEAN TECHNOLOGY FOR MANUFACTURING

NEW TECHNOLOGY - SPEEDY & CLEAN PROCESS LEADING TO INCREASE IN PRODUCTION CAPACITY

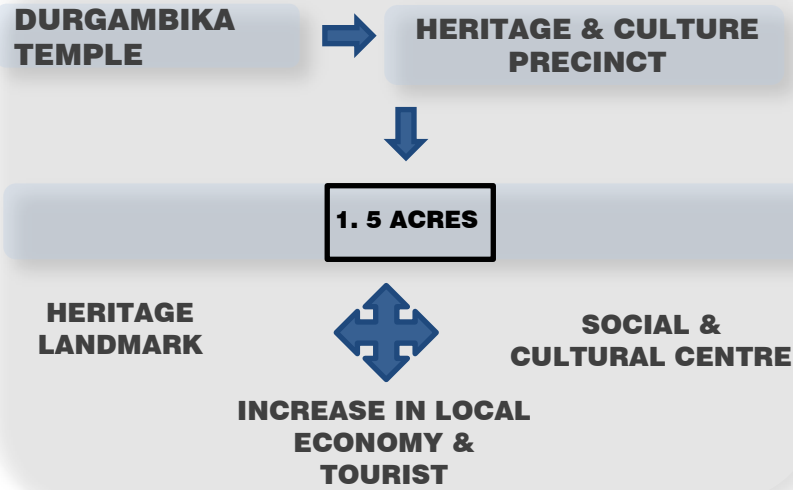
NEW ENGINEERING SERVICE CENTRE PROPOSED WITHIN THE BHATTI LAYOUT & ADDITIONAL JOB CREATION

THE CURRENT INDUSTRY OPERATES 4 DAYS A WEEK - SHARING THE FACILITY CAN DOUBLE THE INCOME & PRODUCTION

INCREASE IN ECONOMY - INFLUENCING THE UPGRADATION OF SURROUNDING AREA

DURGAMBIKA HERITAGE PRECINCT

INTENT

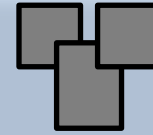


INTERVENTION

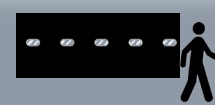
HERITAGE INTERVENTION



CREATING A CULTURAL & HERITAGE CENTRE INCLUDING THE DURGAMBIKA TEMPLE, AANJANEYA TEMPLE AND VEERABHADRESHWARA TEMPLE & ESTABLISHING THE CITY'S IDENTITY



CREATING AN ARRIVAL EXPERIENCE TO THE TEMPLE VISITORS AT POINTS OF ENTRY.

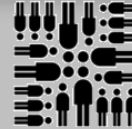


CREATING HERITAGE LINK TO THE HAGEDIBBA CIRCLE. & HONDADA CIRCLE – REGULATING THE FAÇADE, MATERIALS, STREETScape & SIGNAGE.



BEAUTIFICATION OF THE TEMPLE PRECINCT. PROVIDING DRINKING WATER & TOILET FACILITIES

SOCIO-ECONOMIC INTERVENTION



SETTING UP CULTURAL CENTRE & PUBLIC SPACES WITHIN THE PRECINCT – TO ENCOURAGE SOCIO - CULTURAL ACTIVITIES.



DEDICATED SPACE TO ACCOMMODATE VARIOUS TEMPLE & FESTIVE ACTIVITIES



FUNCTIONS SUCH AS ACCOMODATION FACILITIES , TRANSIT FACILITIES , ECONOMIC ACITIVIES.



CULTURAL & LEARNING CENTRES – DANCE,ARTS ETC FOR THE CITY

EXISTING



RELIGIOUS & CULTURAL SIGNIFICANCE FOR PAST 200 YEARS

1.5 ACRES

THE AREA FALLS IN WARD 10 & DISTRICT 1.



MAJOR FESTIVAL IN THIS AREA, THE JATRE HELD BI-ANNUL WITH GATHERING FROM ALL OVER THE STATE



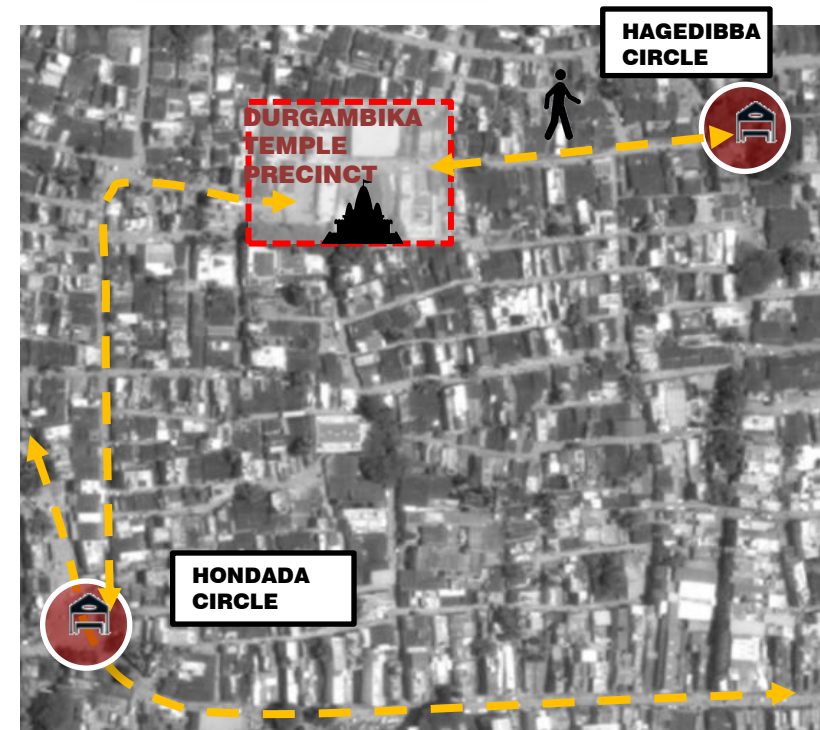
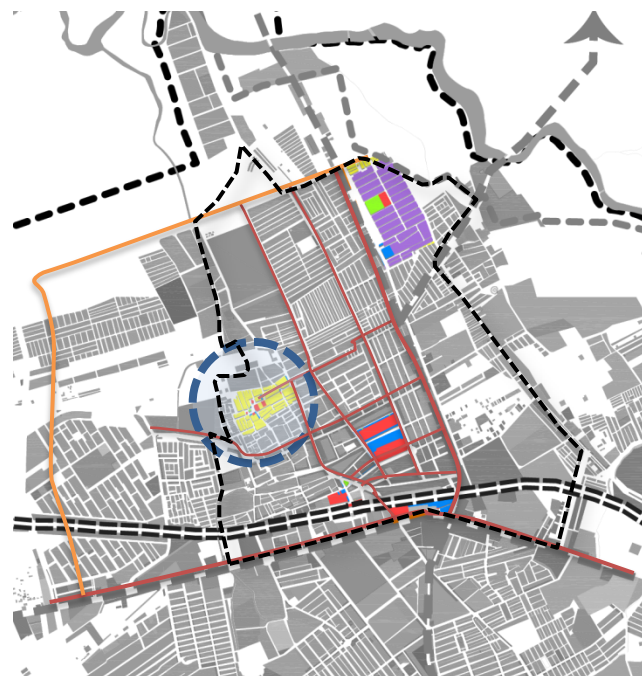
PEOPLE FROM AROUND THE STATE VISIT THE TEMPLE



TECHNOLOGY

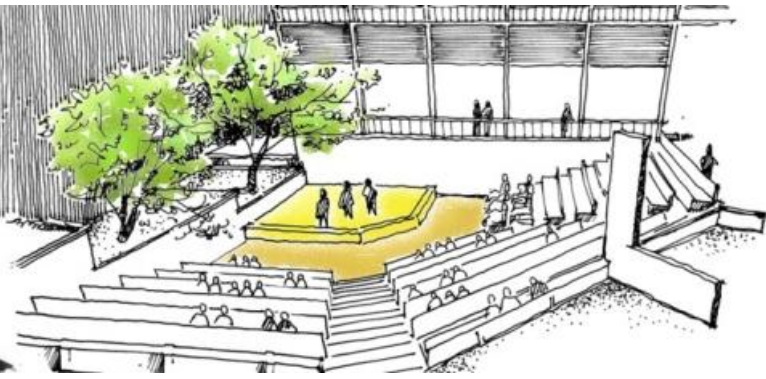


HERITAGE PRECINCT LOCATION



DURGAMBIKA HERITAGE PRECINCT

PROPOSAL



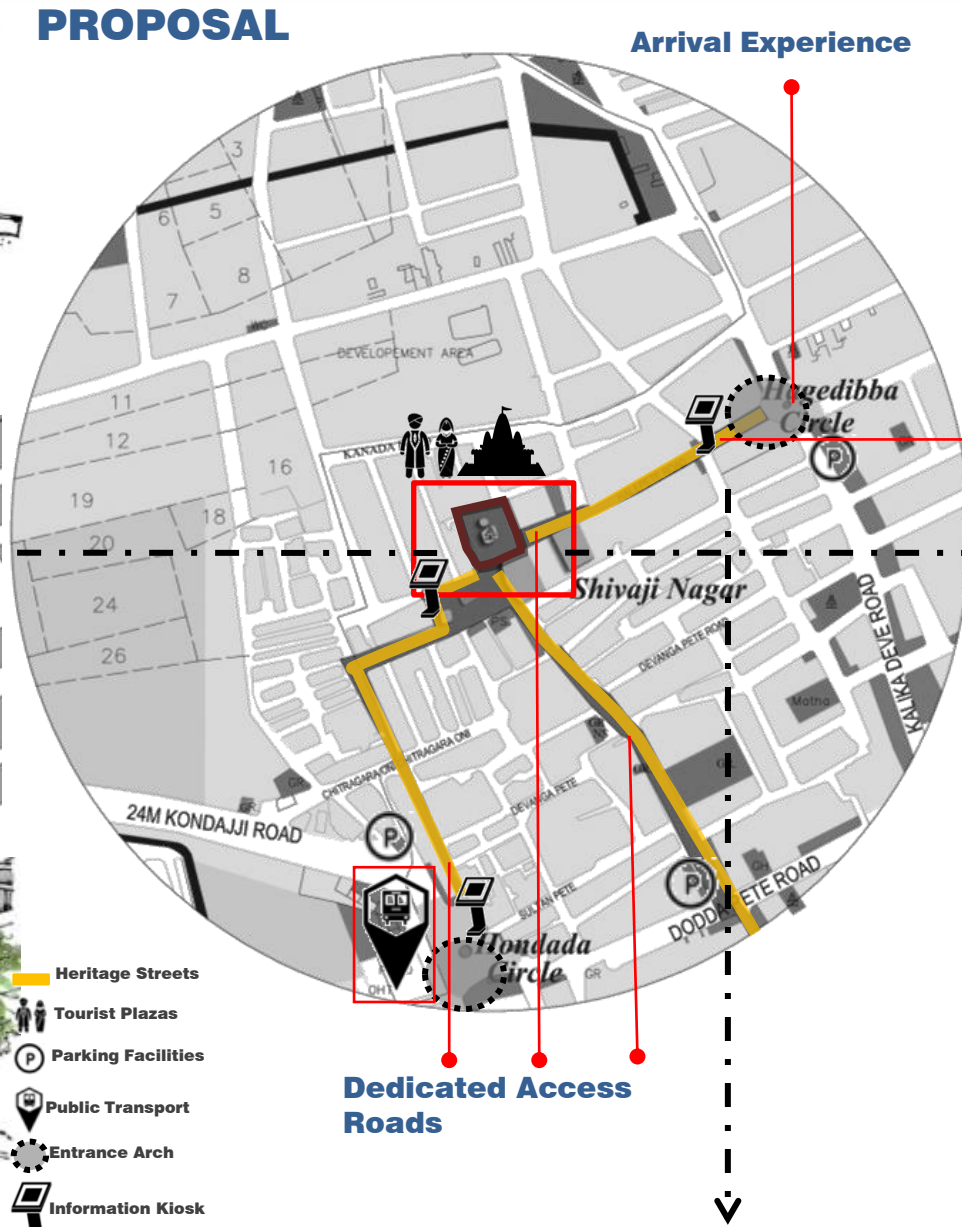
PERFORMANCE CENTRE



HERITAGE PRECINCT



WAITING SPACE WITHIN THE PRECINCT



- Heritage Streets
- Tourist Plazas
- Parking Facilities
- Public Transport
- Entrance Arch
- Information Kiosk

Arrival Experience



Heritage Street



NON MOTORIZED ZONE

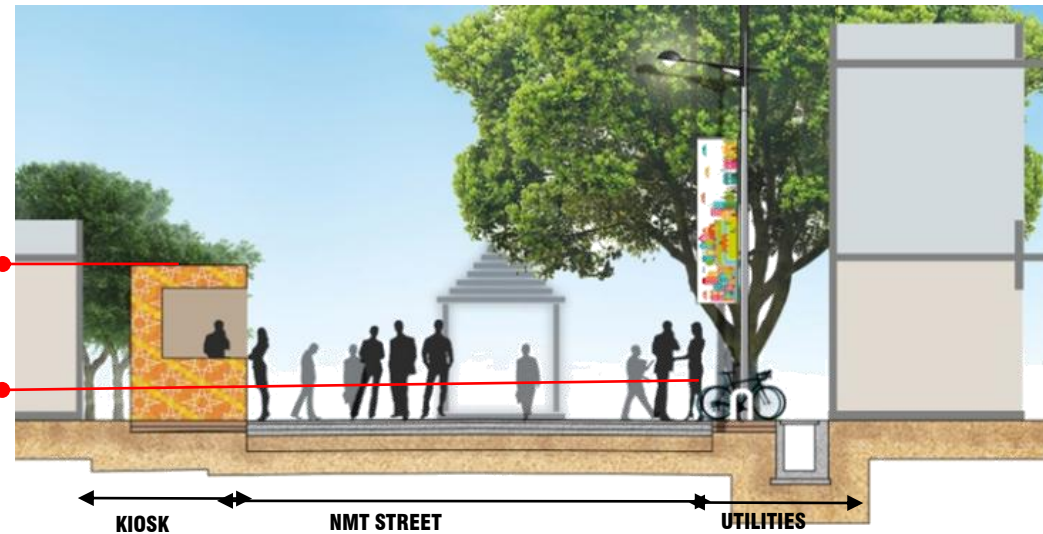
- ELECTRIC AUTOS
- CYCLE POD



CONCEPTUAL SKETCHES OF THE PUBLIC SPACES

(Source: HCP Design, Planning and Management Pvt. Ltd)

PROPOSED HERITAGE STREET SECTION



SOLAR PANEL KIOSK

CYCLE POD

INFORMATION KIOSK

DIGITAL DISPLAY BOARDS







BICYCLE SHARING POD

KIOSKS WITH SOLAR PANELS



PAN-CITY INITIATIVE 1 : SMART URBAN MOBILITY FOR DAVANAGERE

WHY URBAN MOBILITY ?

 <p>CITIZEN RATING / ASSESSMENT</p> <p>↓</p> <p>1 (POOR)</p>	 <p>MODE SHARE OF PUBLIC TRANSPORT IS ONLY</p> <p>↓</p> <p>ONLY 7 %</p>	 <p>% OF ROADS WITH BICYCLE LANE</p> <p>↓</p> <p>0%</p>	 <p>% OF ROADS WITH FOOTPATHS</p> <p>↓</p> <p>12%</p>	 <p>% OF ROADS WITHOUT SIGNAGE & ROAD MARKINGS</p> <p>↓</p> <p>70%</p>	 <p>AVERAGE SPEED OF ALL VEHICLES</p> <p>↓</p> <p>27 Km/Hr</p>
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SMART MOBILITY INITIATIVES :



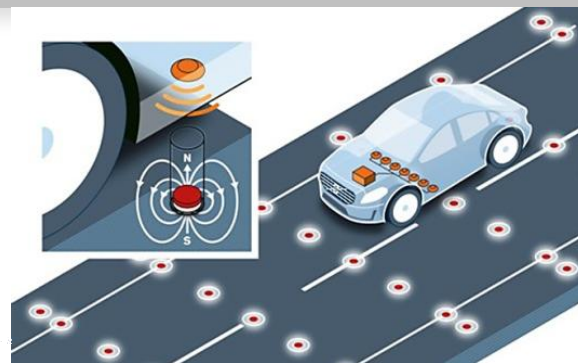
MULTIMODAL INTERVENTION 1. ROAD NETWORK AND SAFETY - ICT INTERVENTIONS



• INTELLIGENT TRAFFIC MANAGEMENT SYSTEM -COMMAND AND CONTROL CENTRE



• CCTV CAMERAS AT TRAFFIC JUNCTIONS AND MAIN ROADS



• SENSORS ON MAJOR ROADS AND JUNCTIONS CONNECTED TO THE COMMAND AND CONTROL CENTRE

2. NON - MOTORIZED TRANSPORT NETWORK - ICT INTERVENTIONS



• BICYCLE SHARING PODS WITH DIGITAL INFORMATION DISPLAYS AND ACTS AS CHARGING STATIONS



• USE OF PAVEGEN TILES IN PEDESTRIAN WALKWAYS FOR GENERATION OF ELECTRICITY

GREEN INTERVENTIONS



• ILLUSTRATION : PB ROAD TYPICAL SECTION
• DIGITAL SIGN BOARDS - INFORMS INCIDENTS, TRAVEL TIME, DIVERSIONS, SAFETY MESSAGES



• INFORMATION KIOSKS CONNECTED TO GIS



• ILLUSTRATION : PB ROAD TYPICAL SECTION
• INTELLIGENT SOLAR LED STREET LIGHTS - POWERED BY PHOTOVOLTAIC PANELS



• ILLUSTRATION:PB ROAD TYPICAL SECTION
• USE OF BIO SWALES (LANDSCAPE ELEMENTS FORMED WITH VEGETATION AND COMPOST)

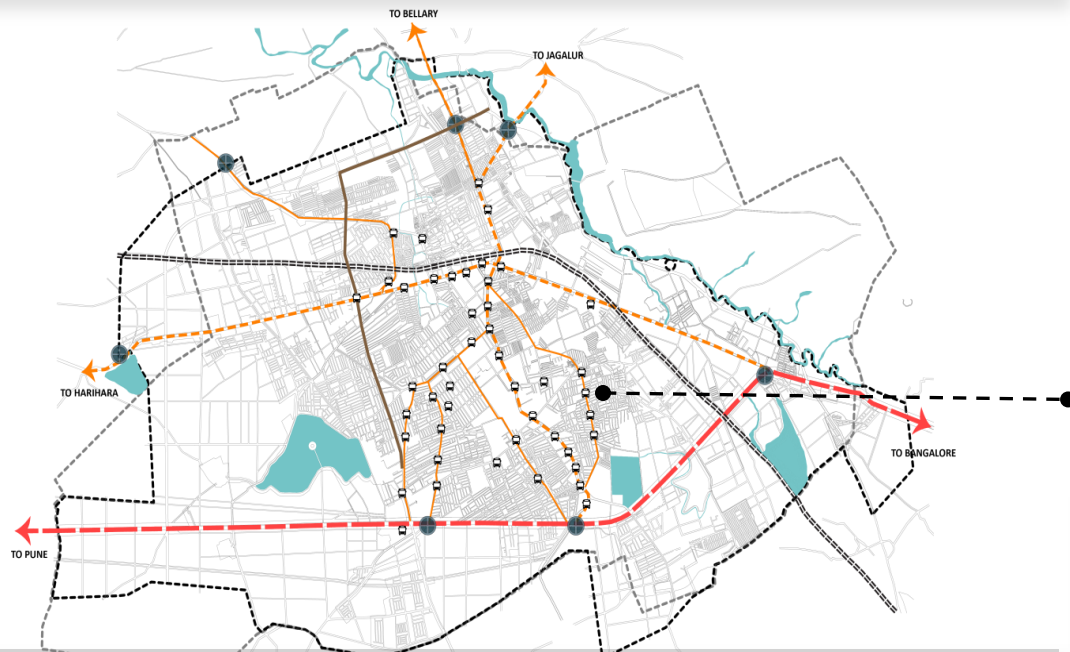


• PERMEABLE PAVEMENTS
• STREET TREES - CRITICAL COMPONENT OF STREETS GREEN ECOSYSTEM

PAN-CITY INITIATIVE 1 : SMART URBAN MOBILITY FOR DAVANAGERE

MULTIMODAL INTERVENTIONS

3.PUBLIC TRANSPORT NETWORK & INFRASTRUCTURE



• PROPOSED 1048 BUS STOPS THROUGHOUT THE CITY
 • 50 BUS STOPS IDENTIFIED IN DAVANAGERE CITY FOR UPGRADATION UNDER PHASE I IMPLEMENTATION

- Information Kiosk
- Charging point for laptops, mobiles and Smartphones
- Fans
- Led Lights
- Advertising spaces
- Photovoltaic panels



ILLUSTRATION : TYPICAL PROPOSED BUS STOP

- PROPOSED 1048 BUS STOPS THROUGHOUT THE CITY WITH UPGRADED ICT FACILITIES
- DIGITAL TAGS AND SIGNAGES , REAL-TIME BUS TRACKING AND PIS INCORPORATED

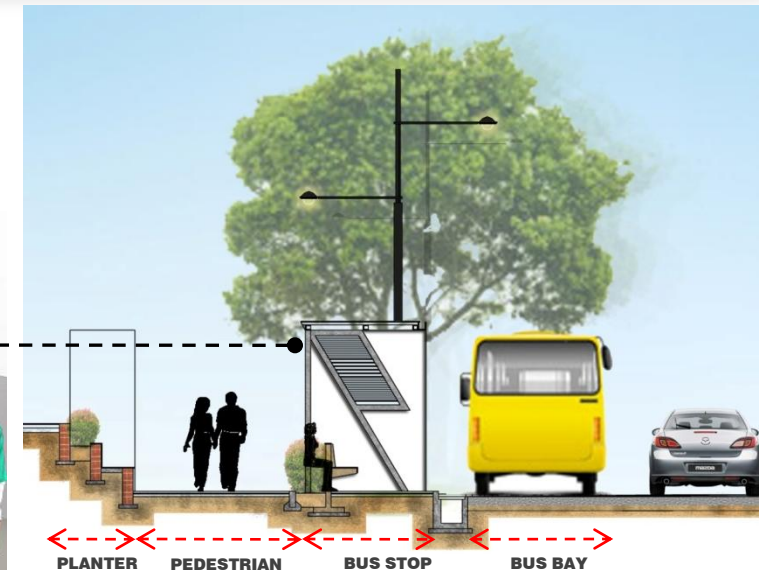


ILLUSTRATION : PROPOSED TYPICAL ROAD SECTION ON PB ROAD

- BUS STOP EQUIPPED WITH ALL ICT FACILITIES

SMART PARKING



- REAL-TIME DATA ON PARKING SPACE AVAILABILITY AND ROUTE USING ICT
- RESERVATION OF PARKING SLOTS USING WEB BASED APPLICATIONS

- SMART METERING
- FEE BASED SERVICE



SMART PARKING CONNECTED WITH THE COMMAND AND CONTROL CENTRE

GREEN INITIATIVES

- POWER GENERATION - USE OF SOLAR PANELS ON THE BUS STOP ROOFS
- CHARGING POINTS FOR VEHICLES AND OTHER DEVICES

INTERMEDIATE PUBLIC TRANSPORT WITH PASSENGER INFORMATION SYSTEM



AUTORICKSHAWS



ELECTRIC AUTORICKSHAWS



CYCLE RICKSHAWS



INFORMATION KIOSKS SMART TICKETING

- PASSENGER INFORMATION SYSTEM
- GIS MAPPING
- REAL TIME JOURNEY PLANNER

NEW ECONOMY MARKETS CREATED:

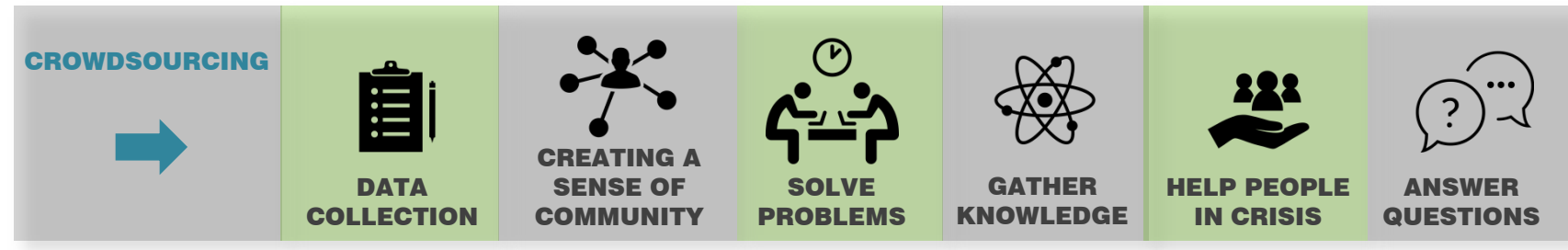
1. SOLAR POWER GENERATION
2. SOFTWARE INDUSTRY
3. DATA AND CALL CENTRE
4. MARKET FOR MAINTENANCE OF ELECTRIC VEHICLES
5. BACK END ENGINEERING SUPPORT

EXPRESSION OF INTEREST RECEIVED FOR PARTNERSHIP IN THE ABOVE INTERVENTIONS BY ACCENTURE AND KPIT TECHNOLOGIES.

PAN-CITY INITIATIVE 2 : ICT INITIATIVE – CROWD MAPPING + INFORMATION KIOSKS

CROWD MAPPING – A PUBLIC ENGAGEMENT PLATFORM

CROWDSOURCING – 1. ALTERNATIVE CIVIC ENGAGEMENT STRATEGY THAT IS NOT BOUND BY TIME AND LOCATION. 2. CAN BE PERFORMED ON THE WEB, MOBILE PHONES, OR OTHER MEDIA.



CASE EXAMPLES OF CROWDMAPPING IMPLEMENTED IN OTHER CITIES

Leverage social media to crowd source ideas in a easy, simple way

Create a virtual "brainstorming" session where all the ideas come together

Break down barriers to entry Encourage creative engagement

FACETS OF CROWD MAPPING

- BUILDING A REAL – TIME SOCIAL CHANGE NETWORK AND BUILD AN ONLINE COMMUNITY AND ADDRESS CITY’S NEEDS**
- POSTING OF CITY CENTRIC PROBLEMS THROUGH COMMUNITIES OF CITIZENS**
- PROVIDE CITIZENS WITH USEFUL INFORMATION ON VARIOUS ISSUES – PUBLIC WORKS, MAINTENANCE, TRAFFIC, EVENTS**
- RECORDING OF COMPLAINTS POSTED AND DOCKETED WITH A UNIQUE NUMBER AND GRIEVANCE REDRESSAL SENT TO CONCERNED AUTHORITY**
- GIS TECHNOLOGY, TO LOCATE ACCURATELY THE POINT OF ISSUE.**
- MOBILE SMS AND APP BASED PLATFORM, REACHING OUT TO LARGER CITIZENS.**

TYPICAL CIVIC ISSUE COMPLAINT FORM

Fixing civic issues is easy as 1-2-3

- 1. Post a complaint**
Post complaints on potholes, unattended garbage, bad roads and other civic issues in your neighbourhood.
- 2. Get community to vote-up**
Vote ups prioritize your complaint. More the vote ups from friends and neighbours, higher the priority.
- 3. Get your complaint resolved**
Interact with your civic authorities and elected representatives to ensure your complaint is resolved.

[POST A COMPLAINT](#)

BENEFITS OF CROWD MAPPING

- **CREATE A DATA MARKETPLACE**
- **IMPROVE PUBLIC/PRIVATE PARTNERSHIPS**
- **SUPPORT POLITICAL AND STRATEGIC INITIATIVES**
- **IMPROVE OWN DECISION MAKING**

PROPOSED GOVERNMENT PROJECTS EASILY ACCESSIBLE TO ALL CITIZENS THROUGH THIS PUBLIC PLATFORM

PUBLIC VOTING TO PRIORITIZE IMPORTANT PROJECTS TO BE IMPLEMENTED

ONLY TAX PAYERS IN THE CITY CAN VOTE THROUGH THIS POLLING PLATFORM

CROWDMAPPING PLATFORM INCORPORATES THE FOLLOWING INITIATIVES

ONE CITY ONE WEBSITE

- ONE SINGLE WEBSITE TO LINK ALL GOVERNMENT DEPARTMENTS AND CORPORATIONS IN THE CITY**
- FACILITY TO HAVE ALL ONLINE TRANSACTION – 2 WAY COMMUNICATION SYSTEM**
- EASY & CONVENIENT COMPLAINT REGISTRATION AND TRACKING**
- CITY APP - MAJORITY OF WEBSITE FUNCTIONS TO BE ON THIS CITY APP**

ONE CITY ONE NUMBER

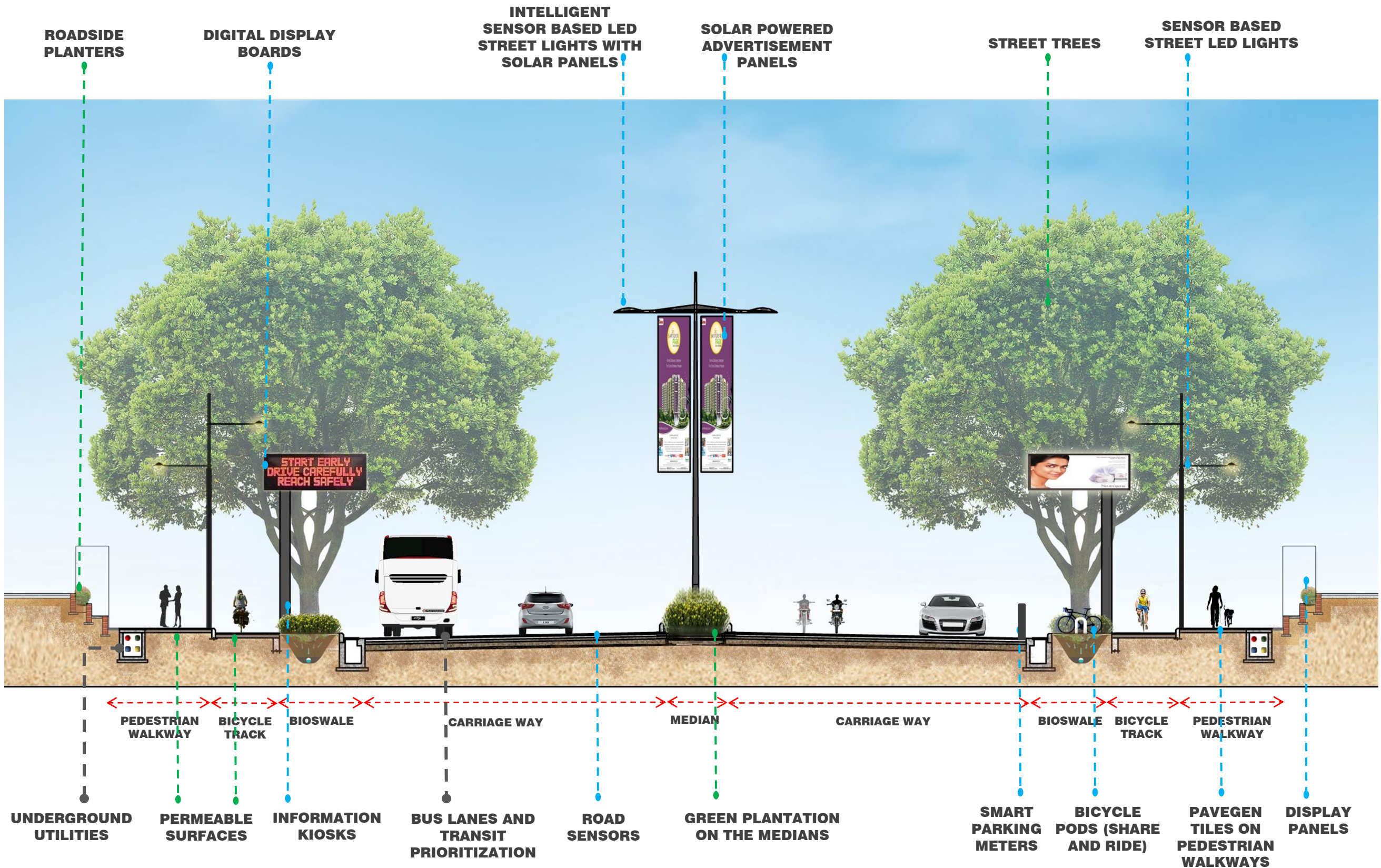
- IVRS AND VOICE BACKED 4 DIGIT SINGLE NUMBER**
- ASSISTANCE FOR ALL CITY INFORMATION**
- DIRECT CALL FORWARDING TO ANY GOVERNMENT OFFICIAL**
- CALL RECORDING FACILITY TO ENABLE COMPLAINT ESCALATION**



CITY ON G.I.S MAPPING AND WIFI HOTSPOTS

- ALL UTILITIES MAPPED TO ENABLE SUITABLE INTERVENTIONS BY ANY GOVERNMENT AGENCIES**
- LOCATION AND RECTIFICATION OF UTILITY FAULTS ON REAL TIME BASIS**
- WIFI HOTSPOTS AT IMPORTANT LOCATION WITHIN THE CITY**

TYPICAL SECTION OF PB ROAD WITH ALL PROPOSED INTERVENTIONS





ದೂರವಾಣಿ ಸಂ. ಕಛೇರಿ:08192-232008 ಫ್ಯಾಕ್ಸ್: 252899 ಮೇಯರ್:255174 ಉಪ ಮೇಯರ್:235309

**PROCEEDINGS OF THE SPECIAL MEETING HELD ON 10-12-2015 AT 11-30 AM
IN THE PRESIDED BY HONOURABLE MAYOR SRI H.B. GONEPPA**

Present: 37

Absent: 08

ವಿಷಯ (Subject)-01

ದಾವಣಗೆರೆ ಮಹಾನಗರಪಾಲಿಕೆ ವ್ಯಾಪ್ತಿಯಲ್ಲಿ 'ಸ್ಮಾರ್ಟ್ ಸಿಟಿ' ಅನುಷ್ಠಾನಗೊಳಿಸಲು ತಯಾರಿಸಿರುವ ಸ್ಮಾರ್ಟ್ ಸಿಟಿ ಉದ್ದೇಶಿತ ಯೋಜನೆ ಮತ್ತು ಆರ್ಥಿಕ (ಹಣಕಾಸು) ಯೋಜನೆಯ ಪ್ರಸ್ತಾವಕ್ಕೆ ಅನುಮೋದಿಸಲು ನಿರ್ಣಯ ಕೈಗೊಳ್ಳುವ ಬಗ್ಗೆ (Resolution of the Davanagere City Corporation regarding Smart City Plan including Financial Plan)

RESOLUTION OF DAVANAGERE CITY CORPORATION REGARDING PROPOSED SMART CITY PLAN INCLUDING THE FINANCIAL PLAN

Statement of purpose:

The Commissioner – Davanagere City Corporation in the Special Meeting of the City Council held on 10th Dec, 2015 at 11:30 am in the Council Hall presented the objectives, Vision and the purpose of inclusion of the City in the Smart City Mission Programme. It was highlighted that based on the exhaustive Citizen Consultation and Stakeholders meeting along with the views expressed by all Government Departments, the Smart City Proposal was drawn up keeping in mind achieving the City's Vision Statement and Goals as identified. Two prominent project precinct has been delineated in the proposal , viz, Pan City Proposal – aimed at providing and improving efficiency in service delivery to the public and Area Based Proposal – an endeavour to improve a specific part of the City as a model one which can be replicated in other areas

Smart City Proposal:

The evolved Smart City proposal including its Financial Plan was placed before the council highlighting the details of the Proposal as under:

1. City Vision Statement: "Davanagere aspires to be a city where L.I.F.E nestles". LIFE stands for Liveable in Safety & Convenience, Inclusive, Financially Vibrant & Futuristic, Edutainment & Environment Friendly
2. Drawn up goals included to improve walkability, encouragement to public transport, efficiency of government & public services, economic rejuvenation to name a few
3. For area based proposal, an area of nearly 785 acres in and around Mandakki Bhatti & Mandipet Market Area was selected based on congestion, population density and requirement as per City's Vision Statement & Goals
4. Based on the Citizen's identified issues, proposal was evolved having the following intervention:

Project Precinct	Brief Details	Indicative Project Cost (Rs Crores)
Area Based Proposal Precincts		
Rejuvenation of Mandakki Bhatti Area – 75 acres	Retrofitting the whole area by modernizing around 1000 puffed rice units by replacing polluting furnaces & machines by electrical & environment friendly machines. Development of Skill Development Centre & Engineering Assistance Facility. Intervention to result in more production capacity, reduction in pollution & additional employment	372.90
Area based replicable rejuvenation Programme	Integrated Bin-Less Solid Waste Management with GPS & RFID Technology, Dedicated Footpath & Cycle Tracks to improve walkability, Underground Utility Corridor, Underground Drainage System, 24x7 metered Water Supply, Rooftop solar installation in all new proposed buildings to be developed under the proposal	301.90
Economic rejuvenation of the Mandipet Area	Around 10 acres of area within the Mandipet is identified to be rejuvenated through re-development process. Development of Commercial and retail spaces along with dedicated parking lots, Multi-level car parking, Information kiosks, Re-development of hospital with capacity augmentation to 150 bed, creation of Library & Knowledge Centre	102.91
Development of Heritage and Cultural area	An area of nearly 3 acres around Durgamika Temple is proposed to be rejuvenated as a Heritage & cultural area with regulated non-motorized traffic, open cultural arena, specific vendor locations & mobile vending kiosks, digital signages, rest rooms, footpath & cycle tracks	6.67
Old City Bus Stand Redevelopment with Integrated Command Centre for Smart City	Redevelopment of the Old Bus Stand at P.B Road with development of Integrated Command Centre for Davanagere Smart City	25.00
TOTAL		809.38
Pan City Proposal Precincts		
ICT & E-Governance	Through this initiative, it is proposed to have the whole city on GIS map to enable interactive Government to Citizen interface and communication, One City One Website & App – interlinking all the Govt Departments through one platform and to enable all online financial transactions and 2-way information flow; One City One Number – An IVRS based call centre backed 4 digit unique number for citizens to access and communicate with any Government Official, get required information, register & track complains etc	38.44
ICT based Mobility Plan & Urban Transport Facility	This plan is totally based on providing a safe and secure Urban Mobility System to citizens based on Smart Solutions like Intelligent Traffic Management System with whole city area under electronic surveillance system; Passenger information system – displays of bus timings with real time bus monitoring system, provision	459.35

Project Precinct	Brief Details	Indicative Project Cost (Rs Crores)
	of display of bus location on City App; Modern Solar Powered Bus Shelters & Intelligent Solar Street Lights with various Sensors & Signages to create conducive environment for segregated traffic flow. It envisages creation of MLCP for parking on PPP model	
TOTAL		497.79
TOTAL INDICATIVE PROJECT COST		1307.18

5. Financial Plan of the Smart City proposal was also placed as part of the Smart City Proposal highlighting the following details:

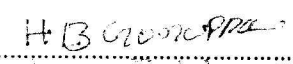
SUMMARY OF FINANCIAL PLAN (Fig in Rs crores)				
Parameter	Usage Pattern			
	Pan City	Area Based	Total	% of Total Outlay - Smart City
TOTAL INDICATIVE PROJECT COST	497.79	809.38	1307.18	100%
Smart City Fund	31%	69%	971.51	74%
PPP Funding	60%	40%	167.56	13%
Convergence with GoI & GoK Schemes	64%	36%	124.91	10%
ULB Funding from own source	27%	73%	43.20	3%

FUND COVERAGE FOR THE WHOLE SMART CITY PROPOSAL YEARWISE OF IMPLEMENTATION								
PARTICULARS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	Total Funding	Balance	Remarks
Total Fund requirement	310.71	280.60	298.13	232.07	185.66	1307.18	0.00	
Fund Release - year wise								
Smart City Fund - Govt. Of India	100.00	100.00	100.00	100.00	82.00	482.00	18.00	Total Fund as pledged for Smart City programme is not included in project funding. Around Rs. 28.49 crores is not utilized which may be used for covering any overheads/O&M or may be used as a corpus for further economic generation
Smart City Fund - Govt. of Karnataka	100.00	100.00	100.00	100.00	89.51	489.51	10.49	
Fund from other GOI Schemes	10.17	10.17	8.00	16.00	0.00	44.35	0	Convergence achieved. Funds from AMRUT and SWATCH BHARAT used only
Fund from other GoK Department	20.14	12.08	40.28	8.06	0.00	80.56	0	Funding from KSRTC envisaged as per their proposal pertaining to Smart City
Private Sector Fund	75.40	55.30	36.86	0.00	0.00	167.56	0	Replicable sector identified where private sector funding with attached revenue stream is envisaged
ULB funding	4.99	3.05	12.99	8.02	14.15	43.20	0.00	City corporation to chip in for development with nearly 3% (less than 5%) of total outlay and to be used as a bridge capital funding process
TOTAL RELEASE	310.71	280.60	298.13	232.07	185.66	1307.18	0.00	Total requirement matched with total year wise funding sources

6. It was highlighted in the Financial plan that effective usage and convergence of funds has been envisaged and City Corporation's share of own funding is 3% of the project outlay

RESOLUTION

IT WAS RESOLVED that, the Smart City Proposal including the Financial Plan addresses the City's Vision and complies with the Smart City Mission Programme and Citizen aspiration and stands approved. Further, it is recommended to the Commissioner to take all necessary actions for taking it forward as per requirement.


 (Signature)
 Mayor
 Davanagere City Corporation
 Date: 10.12.2015



ದೂರವಾಣಿ ಸಂ. ಕಛೇರಿ:08192-232008 ಫ್ಯಾಕ್ಸ್: 252899 ಮೇಯರ್:255174 ಉಪ ಮೇಯರ್:235309

PROCEEDINGS OF THE SPECIAL MEETING HELD ON 23-11-2015 AT 11-30 AM IN THE PRESIDED BY
HONOURABLE MAYOR SRI H.B. GONEPPA

Present: 38

Absent: 07

ವಿಷಯ (Subject)-01

ದಾವಣಗೆರೆ ಮಹಾನಗರಪಾಲಿಕೆ ವ್ಯಾಪ್ತಿಯಲ್ಲಿ 'ಸ್ಮಾರ್ಟ್ ಸಿಟಿ' ಅನುಷ್ಠಾನಗೊಳಿಸಲು ವಿಶೇಷ ಅನುಷ್ಠಾನ ಘಟಕ (Special Purpose Vehicle) ಸಮಿತಿ ರಚನೆ ಮಾಡಲು ನಿರ್ಣಯ ಕೈಗೊಳ್ಳುವ ಬಗ್ಗೆ

RESOLUTION OF THE DAVANAGERE CITY CORPORATION REGARDING SETTING UP OF SPECIAL PURPOSE VEHICLE

Statement of purpose:

The Commissioner – Davanagere City Corporation in its special meeting held on 23rd November, 2015 at 11:30am in the Council Hall presented that as per requirement of Smart City Mission programme, the City Corporation has to form a Special Purpose Vehicle in order to facilitate Mission's implementation programme. With regard to the approved Smart City Proposal and its Financial Plan, it was suggested to form a Special Purpose Vehicle under Companies Act, 2013, duly promoted by City Corporation Davanagere and the Government of Karnataka as the stakeholders

Structure:

The SPV as proposed shall be State Government owned entity with representation from various State Government Agencies to facilitate balanced and co-ordinated implementation of the Smart City Proposal. The structure of the SPV shall be detailed out subsequently in consultation with Government of Karnataka to ensure balanced representation so as to achieve the goals of the Smart City. It is though envisaged that the SPV shall be headed by a Managing Director and a CEO with Board of Directors including Deputy Commissioner – Davanagere District, Mayor, City Corporation, Davanagere, Managing Director – KUWS&DB, Managing Director – KUIDFC, Managing Director – KSRTC, Managing Director – KEONICS, Secretary – Urban Development (GoK), Representative of BESCOM, Representative of BSNL & one representative from Government of India.

It is also proposed to allow qualitative flexibility in the SPV structure to incorporate and adopt to the dynamic market conditions keeping in mind the overarching principle of City's vision

RESOLUTION

IT WAS RESOLVED, after elaborate discussion among Council Members that City Corporation hereby approves to form a Special Purpose Vehicle as per statutory norms with regard to required flexibility and proposed structure as discussed. The Commissioner, City Corporation, Davanagere is hereby recommended to take all necessary action for the same.

H.B. GONEPPA
ಮಹಾಪೌರರು (Signature)
ಮಹಾನಗರ ಪಾಲಿಕೆ, ದಾವಣಗೆರೆ
Mayor
Davanagere City Corporation

Date: 23.11.2015



ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಜಿಲ್ಲಾ ಪಂಚಾಯತ್, ದಾವಣಗೆರೆ.

ಜಿಲ್ಲಾ ಆರೋಗ್ಯ ಮತ್ತು ಕುಟುಂಬ ಕಲ್ಯಾಣ ಅಧಿಕಾರಿಗಳ ಕಛೇರಿ, ದಾವಣಗೆರೆ ಜಿಲ್ಲೆ, ಕೊಠಡಿ ಸಂಖ್ಯೆ: 23, 'ಎ' ಬ್ಲಾಕ್,
ಜಿಲ್ಲಾಡಳಿತ ಭವನ, ಪಿ.ಬಿ.ರಸ್ತೆ, ದಾವಣಗೆರೆ-577 006

ದೂರವಾಣಿ : 08192 237833 ಫ್ಯಾಕ್ಸ್ : 08192 230919 e mail : dhodavangere@ gmail.com

Ref no:ADM/17/2015-16/

Date:30-11-2015.

To

The Commissioner

City Corporation - Davangere

Karnataka

Received Sir

Sub: Letter Of Association regarding partenering Davangere City Corporation/SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission programme for the City of Davangere,

We are pleased to associate with Davangere City Corporation/SPV promoted by Davangere City Corporation for promotion, planning and implementation of the Davangere Smart City Mission Programme. All necessary assistance and Participation form our side Shall be provided to make the misson Programme successful.

We wish that together we can achieve a better tormorrow for Davanere.

Thanking You

Yours Sincerely

(Dr. H.D. Vishwanath)

District Health & Family

Welfare officer, Davangere.



ಕಛೇರಿ : { 918192-259394
918192-255038
ಫ್ಯಾಕ್ : 918192-232022

ದಾವಣಗೆರೆ-ಹರಿಹರ ನಗರಾಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ

ಶ್ರೀ ಡಿ. ದೇವರಾಜ್ ಅರಸ್ ಬಡಾವಣೆ, 'ಎ' ವಿಭಾಗ, ದಾವಣಗೆರೆ - 577 002.

ಕ್ರ.ಸಂ.:

ದಿನಾಂಕ : 25-11-2015.

To,

The Commissioner
City Corporation – Davanagere
Karnataka.

Sub: Letter of Association regarding partnering Davanagere City Corporation / SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission Programme for the City of Davanagere


Sir

We are pleased to associate with Davanagere City Corporation / SPV promoted by Davanagere City Corporation for promotion, planning and implementation of the Davanagere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We wish that together we can achieve a better tomorrow for Davanagere

Thanking You

Yours Sincerely


Commissioner,
DHUDA,
Davanagere.

GOVERNAMENT OF KARNATAKA
KARNATAKA SLUM DEVELOPMENT BOARD
DAVANAGERE SUB DIVISION

No.471/2, Nanda Deepa, 1st Floor, 7th Main Road, 7th Cross Road, P.J.Extension, Davangere-5770042
Ph: 08192 223380 Office of the Assistant Executive Engineer
E-mail:- ksdbaee.dvg@gmail.com

No.KSDB/AEE/Sub-Div/Dvg/Smart City/2015-16/ 229

Date 25/11/2015

To

The Commissioner
City Corporation – Davangere
Karnataka

Dear Sir,

Sub: Letter of Association regarding partnering Davangere City Corporation / SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission Programme for the City of Davangere


Sir

We are pleased to associate with Davangere City Corporation / SPV promoted by Davangere City Corporation for promotion, planning and implementation of the Davangere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We wish that together we can achieve a better tomorrow for Davangere

Thanking You

Yours faithfully,


Assistant Executive Engineer,
Karnataka Slum Development Board,
Sub Division, Davangere.

ಕರ್ನಾಟಕ ರಾಜ್ಯ ರಸ್ತೆ ಸಾರಿಗೆ ನಿಗಮ
ದಾವಣಗೆರೆ ವಿಭಾಗ,
ಪಿ. ಬಿ. ರಸ್ತೆ, ದಾವಣಗೆರೆ - 577 002.
ದೂರವಾಣಿ : 08192-259595 ಫ್ಯಾಕ್ಸ್ : 251282



Karnataka State Road Transport Corporation
Davangere Division,
P. B. Road, DAVANGERE - 577 002.
Tel. : 08192-259595 Fax : 251282

ರಿ. ನಂ. : 372

ದಿನಾಂಕ : 25-11-2015

To

The Commissioner
City Corporation – Davanagere
Karnataka

**Sub: Letter of Association regarding partnering Davanagere City Corporation / SPV
promoted by City Corporation for promotion, planning and implementation of
the Smart City Mission Programme for the City of Davanagere**

Sir

We are pleased to associate with Davanagere City Corporation / SPV promoted by Davanagere City Corporation for promotion, planning and implementation of the Davanagere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We wish that together we can achieve a better tomorrow for Davanagere

Thanking You

Yours Sincerely

Divisional Controller
K.S.R.T.C., Davanagere;

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD, SUB DIVISION,
DAVANGERE



1179/4, Nijalingappa Layout,
Near Bakkeshwara Choultry
Davangere- 577004.
Telephone No: 08192-225439
Email id:- aeedvg.kuwsdb@gmail.com

No: KUWSDB/AEE-DVG/AE-2/2015-16/

639 Date: 25/11/2015

To

The Commissioner
City Corporation – Davanagere
Karnataka.

Sir,

Sub: Letter of Association regarding partnering Davanagere City Corporation / SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission Programme for the City of Davanagere

We are pleased to associate with Davanagere City Corporation / SPV promoted by Davanagere City Corporation for promotion, planning and implementation of the Davanagere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We wish that together we can achieve a better tomorrow for Davanagere.

Thanking You,

Yours Sincerely

[Signature] 25/11/2015
For Assistant Executive Engineer,
K.U.W. S & D. Board Sub Division, Davanagere.



Government of Karnataka
PUBLIC WORKS, PORTS & INLAND WATER TRANSPORT DEPARTMENT
Office of the Executive Engineer, Davanagere.

PWP&IWTD Division, P.B.Road,
Davanagere-577 002.

Phone : 08192 234951, 231530
Fax : 08192 234951
e-mail : eedvg@kpwd.gov.in

No: EE/PWP&IWTD/DVN/DVG/2015-16

Date: 25.11.2015

To

The Commissioner,
City Corporation,
Davanagere
Karnataka.

Sir,


Sub: Letter of Association regarding partnering Davanagere City Corporation / SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission Programme for the City of Davanagere.

We are pleased to associate with Davanagere City Corporation / SPV promoted by Davanagere City Corporation for promotion, planning and implementation of the Davanagere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We wish that together we can achieve a better tomorrow for Davanagere.

Thanking you.

Yours faithfully,


Executive Engineer
PWD Division, Davanagere



BANGALORE ELECTRICITY SUPPLY COMPANY LIMITED

Phone :08192-252811
Fax: 08192-257322
Mob: 9448279012
e:mail: eedavanagere@bescom.co.in

Office of the,
Executive Engineer(Ele.),
O & M Division, BESCOM,
Davangere.

No:EEE/AEE(O)/AE-3/F- 16085
Encl:- One letter

Date:- 25-11-2015

To,

The Commissioner,
City Corporation – Davanagere,
Karnataka.

Sir,

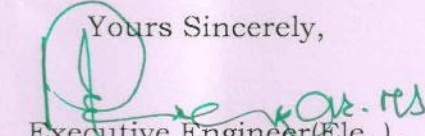
Sub : Letter of Association regarding partnering Davanagere City Corporation / SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission Programme for the City of Davanagere

We are pleased to associate with Davanagere City Corporation / SPV promoted by Davanagere City Corporation for promotion, planning and implementation of the Davanagere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We wish that together we can achieve a better tomorrow for Davanagere

Thanking You,

Yours Sincerely,


Executive Engineer(Ele.),
O & M Division, BESCOM,
Davangere.

Copy to AE-3 /MF

BHARATH SANCHAR NIGAM LIMITED
O/o Assistant General Manager (NWO)Extl P J Extn Davangere

To
The Commissioner
City Corporation – Davanagere
Karnataka

No. G-I/AGM/ 15-16 17 dtd @ dvg the 26-11-2015

Sub: Letter of Association regarding partnering Davanagere City Corporation / SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission Programme for the City of Davanagere

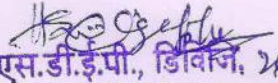
Sir

We are pleased to associate with Davanagere City Corporation / SPV promoted by Davanagere City Corporation for promotion, planning and implementation of the Davanagere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We wish that together we can achieve a better tomorrow for Davanagere

Thanking You

Yours Sincerely


एस.डी.ई.पी., डिविज, 26/11
S.D.E.P. Dvg.

**OFFICE OF THE DEPUTY DIRECTOR FOR PUBLIC INSTRUCTION,
DAVANAGERE DISTRICT.**

Ref no:SC/01/2015-16

Date: 30/11/2015

ಅಧಿಕಾರಿಗಳಿಗೆ ಸೇರಿಸಿದ ದಾಖಲೆ
ಅ.ನಂ.: ೨೨
ಆಯ್ಕೆ: ೨೨
30 NOV 2015
ಅಧಿಕಾರಿಗಳಿಗೆ ಸೇರಿಸಿದ ದಾಖಲೆ

To

The Commissioner
City Corporation – Davanagere
Karnataka

Sub: Letter of Association regarding partnering Davanagere City Corporation / SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission Programme for the City of Davanagere


Sir

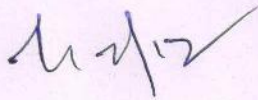
We are pleased to associate with Davanagere City Corporation / SPV promoted by Davanagere City Corporation for promotion, planning and implementation of the Davanagere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We wish that together we can achieve a better tomorrow for Davanagere

Thanking You

Yours Sincerely


[H M Prema]
Deputy Director
For Public Instruction
Davanagere Dist.,





ದೂರವಾಣಿ ಸಂ. ಕಛೇರಿ:08192-232008 ಫ್ಯಾಕ್ಸ್: 252899 ಮೇಯರ್:255174 ಉಪ ಮೇಯರ್:235309

INDICATIVE HUMAN RESOURCE PLAN FOR THE PROPOSED SPV

The following Human Resource Plan has been proposed / envisaged for the SPV for Smart City Davanagere:-

1. Chief Executive Officer - 1.
2. Chief Finance Officer - 1.
3. Finance Officer - 2.
4. Administrative Officer - 2.
5. Law Officer - 1.
6. Planning Division :-
 - Senior Urban Planner - 1.
 - Junior Urban Planner - 3.
7. Engineering Division -
 - Superintending Engineer - 1.(Overall head of Engineering & Implementation)
 - Executive Engineer - 2 (One for PPP projects & One for self-implementation projects).
 - Assistant Executive Engineer - 4.
 - Assistant Engineer - 4.
 - Junior Engineer - 8
8. Any other addition/ alterations to the above list of officials forming part of the SPV organogram may be made with prior approval of the board.

UNDERTAKING

The City Corporation of Davanagere, Karnataka, hereby undertakes to provide initial hand-holding support in terms of Manpower planning as elaborated above to the SPV to be promoted for implementation of its Smart City Mission Programme owing to the fact that the City Corporation is one of the Lead Promoter of the SPV.

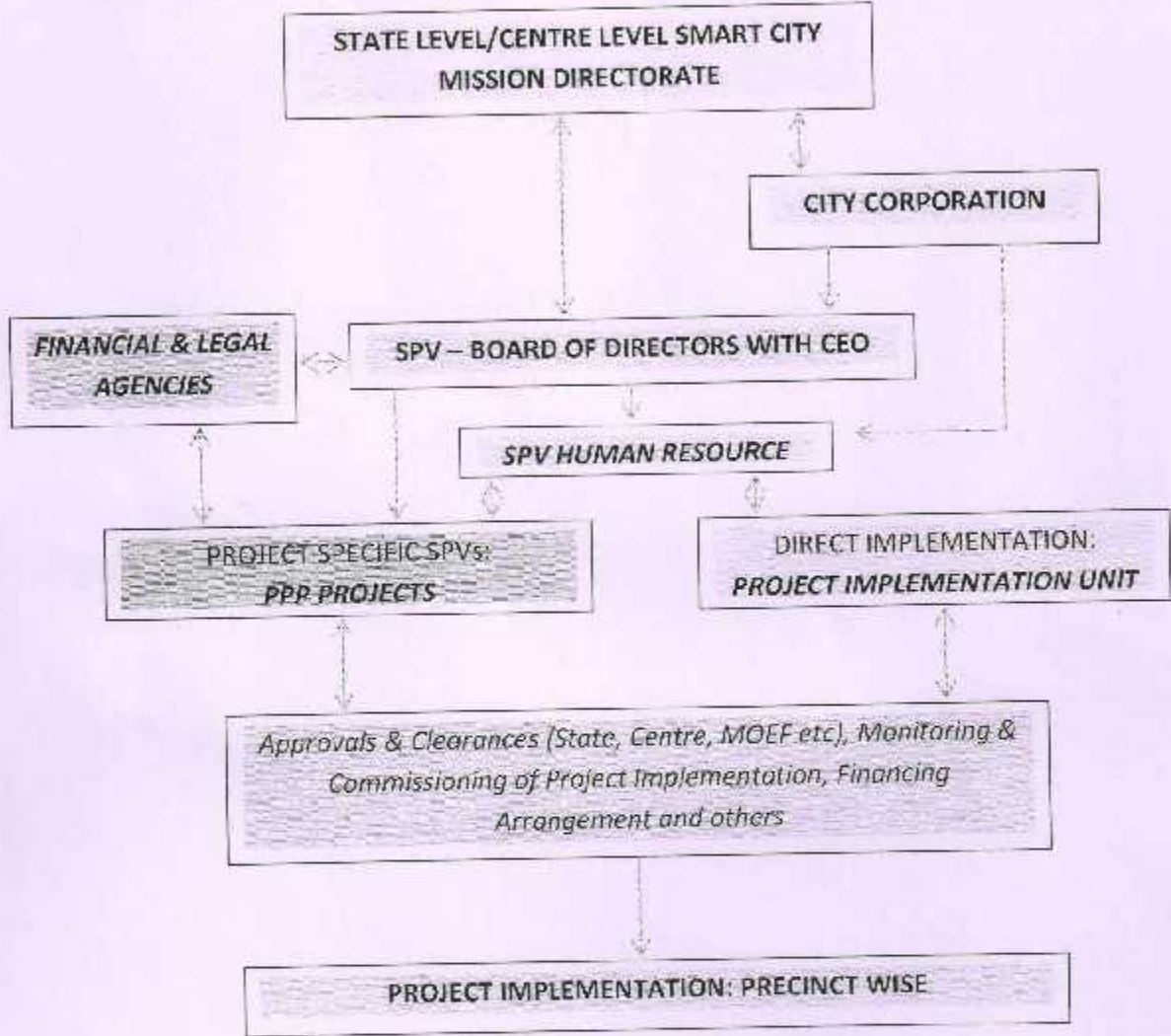
Shri. B.H Naranayappa
COMMISSIONER
City Corporation Davanagere

Date: 09.12.2015



ದೂರವಾಣಿ ಸಂ. ಕಛೇರಿ:08192-232008 ಫ್ಯಾಕ್ಸ್: 252899 ಮೇಯರ್:255174 ಉಪ ಮೇಯರ್:235309

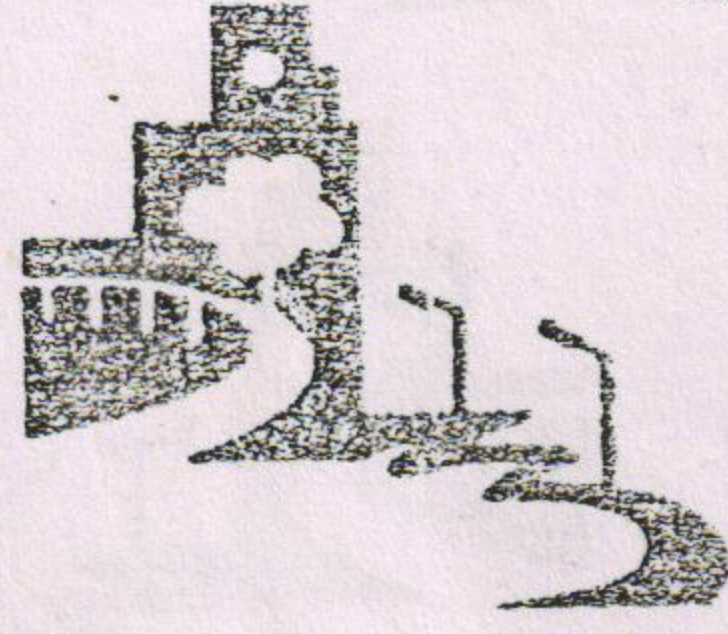
INDICATIVE INSTITUTIONAL ARRANGEMENT FOR OPERATIONALISATION OF THE SPV



UNDERTAKING

The City Corporation of Davanagere, Karnataka, hereby undertakes to provide all sorts of assistance including providing Office Space & support infrastructure to the SPV to be promoted for implementation of its Smart City Mission Programme and to develop a most effective Institutional Arrangement (as shown above subject to adherence to any subsequent changes) for operationalization of the said SPV owing to the fact that the City Corporation is one of the Lead Promoter of the SPV.


Shri. B.H Naranayappa
COMMISSIONER
City Corporation Davanagere
Date: 09.12.2015



Sl. No.	Designation	No. of posts
7.	Accounts Officer ✓	1
8.	Data Entry Operator ✓	2
9.	Driver	1
	Total	10

(iii) Programme Implementation Unit (PIU) at Davanagere, Ranebennur, Harihara and Byadgi:

Sl. No.	Designation	No. of posts				
		Davanagere	Ranebennur	Harihar	Byadgi	Total
1.	Executive Engineer	1 ✓	-	-	-	1
2.	Assistant Executive Engineer	2 ✓	1	1	1	5
3.	Assistant Engineer	4	2	2	2	10
4.	Accounts Officer ✓	1 ✓	-	-	-	1
5.	Account Superintendent	-	1	1	1	3
6.	Data Entry Operator ✓	2	1	1	1	5
7.	IEC cum Community Development Assistant ✓	1	1	1	1	4
	Total	11	6	6	6	29

The above posts shall be filled up on deputation / contract basis as per the HR policy of KUIDFC. The establishment charges shall be met out of the budget for KIUWMIP for the year 2013-14 and reimbursement claimed under Retroactive Financing.


MANAGING DIRECTOR,
KUIDFC, BANGALORE.

Copy for information and necessary action:

1. The General Manager (Admn)
2. The General Manager (PF)
3. The Advisor (UWS)
4. The Task Manager, KIUWMIP

CC to:

1. The Deputy Commissioner, Davanagere District, Davanagere
1. The Deputy Commissioner, Haveri District, Haveri.
2. The Commissioner, City Corporation, Davanagere.
3. The Commissioner, City Municipal Council, Harihar.
4. The Commissioner, City Municipal Council, Ranebennur.
5. The Chief Officer, Town Municipal Council, Byadagi.

ಕರ್ನಾಟಕ ನಗರ ಮೂಲಸೌಕರ್ಯ ಅಭಿವೃದ್ಧಿ

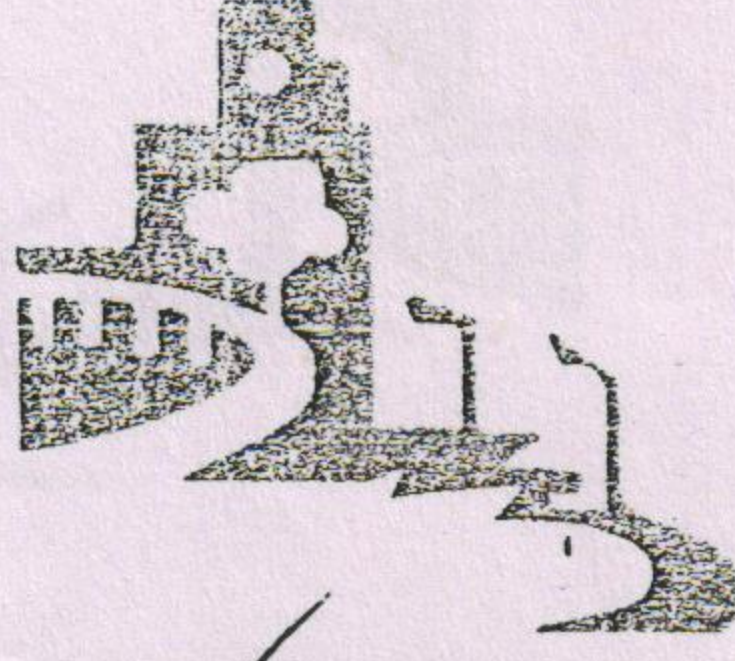
ಮತ್ತು ಹಣಕಾಸು ನಿಗಮ ನಿಯಮಿತ

ಛೋಂದಾಯಿತ ಕಛೇರಿ : ಸಿಲ್ವರ್ ಜುಬಿಲಿ ಬ್ಲಾಕ್,

ಎರಡನೇ ಮಹಡಿ, ಯುನಿಟ ಬಿಲ್ಡಿಂಗ್ ಅನೆಕ್ಸ್, 3ನೇ ಅಡ್ಡರಸ್ತೆ,

ಮಿಷನ್ ರಸ್ತೆ, ಬೆಂಗಳೂರು - 560 027.

ದೂರವಾಣಿ : 080 - 22232021, 22232134, ಫ್ಯಾಕ್ಸ್ : 22232157



Karnataka Urban Infrastructure
Development & Finance Corpn. Ltd.,
Regd. Office : Silver Jubilee Block, 2nd Floor,
Unity Building Annexe, 3rd Cross,
Mission Road, Bangalore - 560 027.
Phone : 080 - 22232021, 22232134, Fax : 22232157
E-mail : info@kuidfc.com website : www.kuidfc.com

No. KUIDFC/KIUWMIP/200/2013-14/ 2975

January 8, 2014

OFFICE MEMORANDUM

Sub: Establishment of a "Regional Programme Management Unit" (RPMU) at Davanagere and "Programme Implementation Units" (PIUs) in Tranche-1 towns for the ADB assisted "Karnataka Integrated Urban Water Management Investment Programme" (KIUWMIP).

Ref: Empowered Committee Proceedings communicated vide No. KUIDFC/KIUWMIP/EC/184/2013-14, dated 3.1.2014.

** *** **

Approval of the Government has been accorded for implementation of KIUWMIP with ADB assistance at an estimated cost of \$ 225 mn (around Rs. 1462 crores with Rs. 65=1\$) with loan component of \$150 mn (Rs. 975 crores) from the ADB, vide G.O. No. UDD 214 PRJ 2013 dated 20.9.2013.

KUIDFC is the executing agency for preparation of programme for KIUWMIP. A Programme Management Unit (PMU) consisting of 9 posts has been established at KUIDFC Head Office for the above programme headed by the Managing Director (Programme Director).

Further, the proposal of (i) creation of 2 additional posts for the PMU at KUIDFC, Head Office, Bangalore (ii) establishment of a Regional Programme Management Unit (RPMU) at Davanagere and (iii) Programme Implementation Unit (PIU) in each of the ULBs of Davanagere, Harihara, Ranebennur and Byadagi has been approved by the Empowered Committee (KIUWMIP) in its first meeting held on 30.12.2013.

Accordingly, the following posts are created under KIUWMIP:

(i) Programme Management Unit (PMU) at KUIDFC, Head Office, Bangalore:

Sl. No.	Designation	No. of posts
1.	Programme Management Specialist	1
2.	Assistant Executive Engineer	1

(ii) Regional Programme Management Unit (RPMU) at Davanagere:

Sl. No.	Designation	No. of posts
1.	Deputy Project Director	1
2.	Executive Engineer	1
3.	Assistant Executive Engineer	1
4.	Assistant Engineer	1
5.	Social Development Officer	1
6.	Manager	1

ESPATCHED
ON 9/1/14

e/c

21. **Link to Smart Cities Initiative.** Davangere and Mangalore are among the proposed smart cities selected by GoK. The first batch of smart cities will be selected by the Government of India by end 2015. Technical assistance support to these cities, such as detailed planning and capacity building, may be included in the consulting services under Tranche 2.

IV. CONCLUSION AND AGREED ACTIONS

22. The Mission appreciates reasonably good progress of Tranche 1, but requested further efforts to expedite procurement of the remaining civil works packages, actions on soft components, and preparation of Tranche 2. The KUIDFC and Mission agreed with the following milestones.

Action

	Responsibility	Date
(i)	Submission of Final UIF guidelines	PMU 15 Dec 2015
(ii)	Submission of IEE and RP for Byadagi	PMU 15 Dec 2015
(iii)	Confirmation of the aide-mémoire	DEA/KUIDFC 24 Dec 2015
(iv)	Submission of draft Summary Appraisal Report (SAR) for Tranche 2	PMU 15 Mar 2016
(v)	ADB's comments on SAR	ADB Apr 2016
(vi)	Tranche 2 fact-finding mission	ADB May 2016
(vii)	Submission of PFR2	DEA/KUIDFC May 2016
(viii)	Loan negotiation for Tranche 2	ADB/DEA/KUIDFC Jul 2016
(ix)	Tranche 2 approval	ADB Sep 2016
(x)	Tranche 2 loan signing	ADB/DEA/KUIDFC Oct 2016

V. ACKNOWLEDGEMENT

22. The Mission wishes to express its appreciation for the full cooperation and hospitality extended by the government, KUIDFC, and ULB officials, and for the constructive discussions held during the Mission. Discussed on 3 December 2015 in Bangalore

Discussed on 4 December 2015 in Delhi

Norio Saito
Principal Urban Development
Specialist
South Asia Department

From: Praveen Siddannavar

Sent: Thursday, December 10, 2015 6:10 PM

To: 'commissioner_davanagere@yohoo.com'

Subject: MOU for ITMS & other offering for Smart City Project, Davanagere

Dear Sri BH Narayanappa,

Further to our email this morning about proposal for ITMS that we submitted & subsequent discussions and presentation with SREI Consultants, we hereby are keen and intend to work with Davanagere City Corporation on Smart city project. Kindly find attached MOU that indicates our interest to work with DCC. If you need any further information please feel free to contact me

Many thanks,

Encl - MOU

Regards,

Praveen Siddannavar

Head – Bangalore Center

Phone: +91 80 – 3028 7500 | cell: +91 – 98803 10228

KPIT | Web: www.kpit.com Social: [Facebook](#) | [Twitter](#) | [Linkedin](#) | [Youtube](#)

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Attachments area

Preview attachment MoU - KPIT_ITMS_Davanagere_updated.docx

W

MoU - KPIT_ITMS_Davanagere_updated.docx

ಕರ್ನಾಟಕ ರಾಜ್ಯ ರಸ್ತೆ ಸಾರಿಗೆ ನಿಗಮ

"ಸಾರಿಗೆ ಭವನ" ಕೇಂದ್ರ ಕಛೇರಿ,

ಕೆ.ಎಚ್.ರಸ್ತೆ, ಶಾಂತಿನಗರ, ಬೆಂಗಳೂರು-560 027. ಭಾರತ

ದೂರವಾಣಿ : 080-22221321 / 22221325

ವೆಬ್-ಸೈಟ್ : www.ksrtc.in



Karnataka State Road Transport Corporation

"Transport House" Central Offices,
K.H.Road, Shanthinagar, Bangalore-560 027. India

Tel : 080-22221321 / 25

Website : www.ksrtc.in

ಸಂಖ್ಯೆ:ಕರಸಾ:ಕೇ:ಕ:ಯೋಅಂಅಂ: 578/2015-16

ದಿನಾಂಕ: 15-10-2015

ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು ಮತ್ತು
ಮಿಷನ್ ಡೈರೆಕ್ಟರ್-ಎಸ್‌ಸಿಎಂ,
ಕರ್ನಾಟಕ ನಗರ ಮೂಲಸೌಕರ್ಯ ಅಭಿವೃದ್ಧಿ
ಮತ್ತು ಹಣಕಾಸು ನಿಗಮ ನಿಯಮಿತ,
ಸಿಲ್ವರ್ ಜುಬಿಲಿ ಬ್ಲಾಕ್,
ಎರಡನೇ ಮಹಡಿ, ಯುನಿಟಿ ಬಿಲ್ಡಿಂಗ್ಸ್ ಅನೇಕ್ಸ್,
3ನೇ ಅಡ್ಡರಸ್ತೆ, ಮಿಷನ್ ರಸ್ತೆ,
ಬೆಂಗಳೂರು.

ಮಾನ್ಯರೆ,

ವಿಷಯ: Note on Best practices for Smart City Mission (SCM)

ಉಲ್ಲೇಖ: ಇ-ಮೇಲ್ ಸಂದೇಶ ದಿನಾಂಕ 05-10-2015

ಬೆಸ್ತ್ ಪ್ರಾಕ್ಟೀಸಸ್ ಫಾರ್ ಸ್ಮಾರ್ಟ್ ಸಿಟಿ ಮಿಷನ್‌ಗೆ ಮಾಹಿತಿಯನ್ನೊದಗಿಸುವಂತೆ ಉಲ್ಲೇಖಿತ ಇ-ಮೇಲ್ ಪತ್ರದ ಮೂಲಕ ಕೋರಿರುವುದಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಮಾಹಿತಿಯನ್ನು ಸಿದ್ಧಪಡಿಸಿ, ಈ ಪತ್ರದೊಂದಿಗೆ ಲಗತ್ತಿಸಿ, ಮುಂದಿನ ಕ್ರಮಕ್ಕಾಗಿ ಈ ಮೂಲಕ ಕಳುಹಿಸಲಾಗಿದೆ.

ಅಡಕ: ಮೇಲಿನಂತೆ



Gm(y/A)

19/10

ತಮ್ಮ ವಿಶ್ವಾಸಿ,

ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು

24/10

KSRTC : CENTRAL OFFICE : BANGALORE

Note on Best Practices for Smart City Mission.

Most of us love cities. As the hubs of commerce and culture, cities naturally attract people. Since the beginning of urbanization, mobility has been a key issue and an important motor for growth and progress. In the past, mobility might have stood for the freedom of the people to move around using new means of transportation in growing cities, independent of their place of residence or their place of work. But nowadays, at least in the western world, the linking of traffic and communication is becoming increasingly important as transportation infrastructures are pushed to their limits, demand for alternative means of transport and routes increases and pressure to optimize existing systems grows. Today more than 50% of the world's population lives in or around a city. By 2050, this number is expected to reach 70%. The implications are profound. Cities already generate 70% of energy-related greenhouse gas emissions. That's why our cities urgently need to evolve and become part of the solution to climate change. Tomorrow's smart cities will redefine sustainability and liveability.

A Smart City has to have a smart bus network, and this implies one that is easy to understand, intuitive, faster and better connected, so travelers can save time and move around the city in a simpler and more sustainable manner. What is more, bringing on board improvements to technology ensures the system is managed more efficiently: "right-of-way" traffic lights, transfer points, in-bus and bus stop information, smart management to improve speed, frequency and service provision across the city, as well as the optimization of resources based on people's needs. Transportation systems that are efficient, environmentally friendly and move hundreds to thousands of people quickly, comfortably and affordably to their destinations will be a defining feature of many of the new cities.

Inner-city real estate is expensive and scarce. In most of our cities, we've already handed over so much valuable space to private vehicles. The challenge is to optimize urban land use by implementing an integrated and highly efficient mobility infrastructure. Public transit solutions use significantly less land while moving an exponentially greater number of people than the personalized mode of Transport.

Commuting by personalized mode of transit not only creates significant pollution, it also wastes precious hours and creates endless frustration. Even if you drive an electric or hybrid car, you still lose time sitting in traffic jams. In contrast, Public transit systems bypass road congestion thereby giving more time to spend to the commuters.

Cities either spread out or rise up, and if they're big enough, they often do both. Whether population density expands vertically or horizontally determines which mode of transportation makes the most sense. In a mixed-use urban area, people can walk to the grocery store and take the metro to the movies. In suburban residential and commercial areas, you need a car to go the mall. The available transport infrastructure shapes people's lifestyle and transportation habits. And it all boils down to the fact that people's transport behavior is driven by convenience.

The challenge for Smart cities is to integrate the different modes of transport into one convenient, easily accessible, time efficient, affordable, safe and green system. An integrated systems approach optimizes infrastructure and energy consumption and provides transportation for city residents exactly where and when they need it.

Intelligent traffic planning, the promotion of public transport and the improved interconnectedness of all road users in a city-wide communication infrastructure comprise the mobility characteristics of a smart city. Fewer traffic jams in the inner city and the development of a largely zero-emission public transport system ultimately have a positive impact on the environment and the quality of life in smart cities.

The public transportation system is the lifeline of a smart city. It fills the city with life through a continuous and controlled flow of people and products and carries everybody to his or her destination. In an intelligent city, the development of the public transportation system is promoted because it provides the general public with basic services. If it is expanded city-wide and its efficiency is improved, public transportation make a significant contribution to the reduction of traffic congestion and emissions. The individual can contribute to a more efficient and safer transport system with the help of intelligent traffic routing. Today, there are some smartphone apps on the market that provide drivers with traffic information in real time and other apps use the communication between vehicles and traffic infrastructure or that mediate ad-hoc shared-ride services that contribute to more efficiency and safety on the road. The areas of traffic routing and driver assistance offer even more development opportunities for individual traffic in the areas of information and communication technologies.

Using public transport should be very easy to encourage more people to use it. But the services, apps and tools we have now cannot satisfy users' requirements. Data are scattered in different services and not integrated very well. Smart Bus Transport is a solution trying to make life easier for public transport users.

Taking Public Transport bus should be easy

All the passenger need to do is

- Walk to the bus stop
- Wait for the bus
- Get on the bus
- Get off the bus
- Walk to the destination

But various kinds of problems may occur in this simple flow, as described below. Smart Bus Transport system should assist users at different steps of this flow to make sure users finish it successfully.

Pain points

Below are some scenarios cause inconveniences to users

above features and functions of On-board, Bus stop and Portable user interface. Further some features connected to availability of seats, etc has been taken up by KSRTC in its Vehicle Tracking and Monitoring System, which is totally IT based Smart Mobility Plans for Inter City operations.

The low floor buses were introduced in Mysore City under the JnNURM Scheme with the buses built in KSRTC Regional Workshops, Bangalore duly following the Automotive Indian Standards (AIS-052) and recommendatory Urban Bus specifications of Ministry of Urban Development. The design of the bus constructed in-house has been identified and appreciated as 'Excellent' by Ministry of Urban Development. The design and specifications are circulated to other cities in India as a model and guide for them to produce similar or better buses. It is also felt with affirmity and reliability, KSRTC is in a position to take up all the essentiality needed to promote, develop and expand to the fullest capacity and also can face the challenges that may come up in future with regard to "SMART PUBLIC TRANSPORT" in "SMART CITIES" .

Plans for Four Smart Cities:

Four cities of Karnataka State in the jurisdiction of KSRTC viz., Davanagere, Tumkur, Mangalore and Shimoga have been selected as Smart Cities and a state of the art public transport facility and infrastructure with modern bus terminals have been planned. The KSRTC is proposing the following transport infrastructure facilities and passenger amenities at these proposed smart cities.

Davanagere:

- The existing bus station at Davanagere, built in the year 1989 on 4 acres 27 guntas of land is inadequate and outdated to cater to the present day transport needs of the travelling public.
- Hence, it is proposed to construct a modern bus terminal at Davanagere in the existing bus station site with all passenger amenities on par with the Airports.
- KSRTC requires Rs.100 crores for reconstruction of this bus station at Davanagere.

Tumkur:

- KSRTC is operating 1600 bus departures and arrivals from Tumkur city with two depots at Tumkur.
- The existing bus station built in the year 1985 on a land of 4 acres 17 guntas is inadequate for handling so many departures and arrivals of buses.
- At present there is no city bus terminal at Tumkur city wherein 50 city buses are operated.
- Hence, it is proposed to construct a state of the art bus terminal in the existing bus depot land and the following are the proposed projects in Tumkur city.
 - a) Construction of bus terminal in the existing bus station land - Rs.40 crores
 - b) Construction of city bus terminal in the bus depot land - Rs.40 crores
 - c) Upgradation of existing transport infrastructures for maintenance of buses - Rs.25crores
 - d) Construction of city terminals at Khyathasandra, Heggere, Urukere & Guluru – Rs.25crores

Mangalore:

- There are 3 bus depots at Mangalore and the existing bus station was built in 1986 on 4 acres 13 guntas land.
- KSRTC proposes to develop the following transport infrastructure in Mangalore city:
 - a) Construction of a modern Transport Hub at Mangalore-Pumpwel Circle -s.250 crores
 - b) Development of transport infrastructure for maintenance of buses – Rs.50 crores
 - c) Construction of city bus terminal at Mangalore – Rs.25 crores.

Shimoga:

- KSRTC has constructed a state of the art bus station at Shimoga during 2011.
- KSRTC proposes to develop the following transport infrastructure in Shimoga city.
 - a) Construction of city bus terminal at Shimoga – Rs.25 crores. .
 - b) Development of transport infrastructure for maintenance of buses – Rs.25 crores.

- Typically there will be multiple choices (stop/route combinations) to use public transport to go to certain destinations. Commuter may need to consider several factors to make the best choice and he need to use several different services and search and compare results several times.
 - Walk distance to bus stop
 - Bus's current location, how long I need to wait at the bus stop
 - Trip duration/distance, etc.

Smart Bus Transport

What Smart Bus Transport needs to do is to assist public transport users. Major features of Smart Bus Transport should be including:

- Better journey planner
- Check user is in the right bus stop using
- Real-time bus position update with live map
- Bus arrival notification
- Driver dashboard to show passengers boarding status at each stop
- Stop arrival notification

In order to achieve well determined goal and the objectives, a design of Smart Bus System features and functions of three categories are of base need and they are detailed below;

- a. On-board
- b. Bus stop
- c. Portable user interface.

On-Board

- 1) "Next-stop" display and voice announcing system, passengers will know where they are and at what place, they have to get off the bus. People unfamiliar with the route or area will be more likely to take buses as the announcing system provides a navigation guide to them.
- 2) The passenger data collected from the Electronic Ticketing Machine (ETM) will be translated into statuses for people to know the seat availability on a bus. The transit dispatch center can use this information to determine the need to dispatch extra buses during peak-passenger hours.
- 3) Lastly, through the on-board GPS device and the RF link, the transit center will be able to gather transit data collected from buses in real-time. A set of desired functionalities and the proposed infrastructures are summarized in the Table below.

Desired Functionality	Infrastructure and Technology
"Next Stop" announcement	LCD display, Speaker
Real-time position tracking	GPS antenna and microcontroller chips
GPS navigation for bus drivers	On-board computer with VGA display
Inform the bus stop when bus arrives	Voice Announcement
Estimate bus capacity and availability	ETM data
Communicating with transit control center	RF link implementing GPRS protocol

BUS STOP

- 1) Real-time passenger information will be displayed at bus stops. Bus stops will be equipped with an RF link to receive data from the transit center, LCD to display real-time transit data, and a Bluetooth beacon to communicate with Bluetooth-enabled cell phones at the bus stop. As well, to increase safety, camera surveillance will be added.
- 2) The real-time information will be available via website and a Smartphone app. specifically, the app will feature real-time schedule, trip planner, bus stop locator and bus arriving alarm. The alarm will assist special needs people by alerting their phone when and which bus arrives. In more details, a bus stop will detect a Bluetooth-enabled Smartphone within a range and allow the app to transfer information displayed at the bus stop to the Smartphone. When the bus arrives, the bus stop will alert the person(s) at the bus stop using voice or vibration function of the cell phone and at the same time send a signal to let the bus know someone with special needs wishes to board. A set of desired functionalities and proposed infrastructures are summarized in the below given table;

Desired Functionality	Infrastructure and Technology
Receive real-time passenger information from the transit control center:	RF link implementing GPRS protocol
Real-time schedule, Bus capacity / availability	
Display passenger information of next buses	LCD display
Short range communication: Transfer passenger information to user mobiles Notice a bus-arriving event	Bluetooth beacon
Camera surveillance	Camera on top of bus stop taking photos at every certain interval

User Interface

A user can access transit data; a. Website, b. Phone, and c. Smartphone. Users can check schedules and other information via the transit website, hotline / text messages, and Smartphone apps. Users can also download real-time transit data from a bus stop through Bluetooth. This provides an alternative way of perceiving information displayed at the bus stop. By translating the text to voice on their Smartphone, visually impaired persons will be able to "feel" the display at a bus stop and get notified when and which bus is arriving.

Desired Functionality	Platform
Real-time passenger information	Smartphone, Website, Phone service provider
Real-time map with bus flow and bus stops	Smartphone, Website
Real-time trip planner	Map based trip planner
Bus arriving alarm	Smartphone

KSRTC has adopted Intelligent Transport System for its fleet operation in Mysore City and this system has complied with in a positive, progressive and promissive way considering all the

above features and functions of On-board, Bus stop and Portable user interface. Further some features connected to availability of seats, etc has been taken up by KSRTC in its Vehicle Tracking and Monitoring System, which is totally IT based Smart Mobility Plans for Inter City operations.

The low floor buses were introduced in Mysore City under the JnNURM Scheme with the buses built in KSRTC Regional Workshops, Bangalore duly following the Automotive Indian Standards (AIS-052) and recommendatory Urban Bus specifications of Ministry of Urban Development. The design of the bus constructed in-house has been identified and appreciated as 'Excellent' by Ministry of Urban Development. The design and specifications are circulated to other cities in India as a model and guide for them to produce similar or better buses. It is also felt with affirmity and reliability, KSRTC is in a position to take up all the essentiality needed to promote, develop and expand to the fullest capacity and also can face the challenges that may come up in future with regard to "SMART PUBLIC TRANSPORT" in "SMART CITIES" .

The Government of India has selected following six cities of Karnataka for upgradation to smart cities

- Mangalore
- Davangere
- Shivamogga
- Tumkur
- Belgaum
- Dharwad

First four cities named above comes under the KSRTC Jurisdiction, It is proposed to establish Smart Transport in these cities. The city wise components required for smart transport establishment and its estimated cost is is given below.

Davangere city

Sl. NO.	Parameters	Numbers	Cost (Rs in Crores)
1	No. of New city Vehicles proposed	50	19.03
2	ITS (CCS, PIS, Inbus equipments)	1	11.53
3	Civil Infrastructure		
	➤New Depot /Upgradation	1	15.00
	➤Bus Terminals	1	10.00
	➤Others		25.00
4	Total		80.56

**SMART CITY PROPOSAL – DAVANAGERE
RESOLUTION REGARDING AREA BASED DEVELOPMENT PROPOSAL FOR MANDAKKI BHATTI**


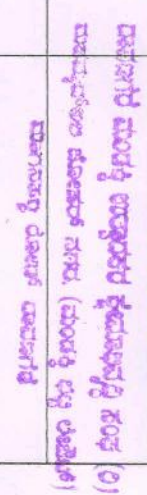
Objective: To rejuvenate the Mandakki Bhatti area comprising of around 75 acres located in ward no. 4 of Davanagere City in order to align the development with the City's Vision statement and goals with focus on:

- Reduction in pollution level
- Offering better quality of life to the residents & workers
- Enhancement in economic activity in the area

Proposal: In order to achieve the objective, following intervention is suggested

- Retrofitting the existing civil structures of the present units with low cost shed materials easily available with proper ventilation system
- Replacing traditional furnaces with modern technologically superior furnaces which are environment friendly
- Maximizing area development through phase wise intervention
- The financial aspect of the whole proposal is being proposed to be taken up through Smart City Mission programme with minimal stress on unit owners.

DECLARATION/RESOLUTION OF THE MANDAKKI BHATTI OWNERS ASSOCIATION IN SUPPORT OF THE ABOVE MENTIONED PROPOSAL AND OBJECTIVES

Sl No	Name	Address	Phone no	Designation within Association	Signature with date
03	AKBAR ALE	SPRE NO: 634 11th cross, B.O. LAYOUT, Davanagere	944865584	SECRETARY	 25/11/15
					 Davanagere Smart City Development Project (S) Ltd. Mandakki Bhatti Owners Association (Smart City Cell)



**SMART CITY PROPOSAL – DAVANAGERE
RESOLUTION REGARDING AREA BASED DEVELOPMENT PROPOSAL FOR MANDAKKI BHATTI**

Objective: To rejuvenate the Mandakki Bhatti area comprising of around 75 acres located in ward no. 4 of Davanagere City in order to align the development with the City's Vision statement and goals with focus on:

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SI No	Name	Address	Phone no	Designation within Association	Signature with date
01	S.H. RIYAZ AHMED SAB	#298/1, 1st main 1st cross, N.R. Pate Davanagere	9481864685	PRESIDENT	S.H. RIYAZ AHMED 25-11-2015
02	H.F.G. SHAFI	520/2, Channarayana Rd - Main road Davanagere	9448369450	VICE PRESIDENT	H. Shafiq 25-11-15





Sharan Sales Corporation

3308/9A, 12th Main. 5th Cross, M.C.C. 'B' Block, DAVANGERE.

Dealers : Solar Water Heaters, Lighting Systems, U.P.S., Gas Gysar,
Gujarat Boilers, Water Purifiars, Pressur Pumps

Ref.No.....

Date 25-11-2015.....

To

The Commissioner
City Corporation – Davanagere
Karnataka

Sub: Letter of Association regarding partnering Davanagere City Corporation / SPV promoted by City Corporation for promotion, planning and implementation of the Smart City Mission Programme for the City of Davanagere

Sir

We are pleased to associate with Davanagere City Corporation / SPV promoted by Davanagere City Corporation for promotion, planning and implementation of the Davanagere Smart City Mission Programme. All necessary assistance and participation from our side shall be provided to make the mission programme successful.

We are happy to provide technical assistance and provide roof top solar panel for the newly constructed building and other structures. So as to provide power to the Corporation or Bescom power grid at the prevailing cost.

We wish that together we can achieve a better tomorrow for Davanagere

Thanking You

Yours Sincerely,

For Sharan Sales Corporation


Proprietor

Subject: Re: Partnership with Accenture-reg.
From: john.r.samuel@accenture.com (john.r.samuel@accenture.com)
To: commissioner_davanagere@yahoo.com;
Cc: sharma.vishal@accenture.com; vishvesh.prabhakar@accenture.com;
Date: Tuesday, 8 December 2015 2:31 PM

Hon'ble Commissioner,

We thank you for your mail and your interest in Accenture for partnering on Smart City initiatives in your region.

As you are aware, Accenture is leading on Smart City and Sustainability program's across the world. We have recently partnered with Nasscom also in this area.

We would be keen to work with you and explore opportunities to bring these best practices / programs to your region - on mutually agreeable terms.

We look forward to meeting with you and your teams to discuss this further.

Kindest regards
John Samuel

Sent from my iPhone

On 07-Dec-2015, at 19:05, "commissioner davanagere" <commissioner_davanagere@yahoo.com> wrote:

Dear Mr John Samuel

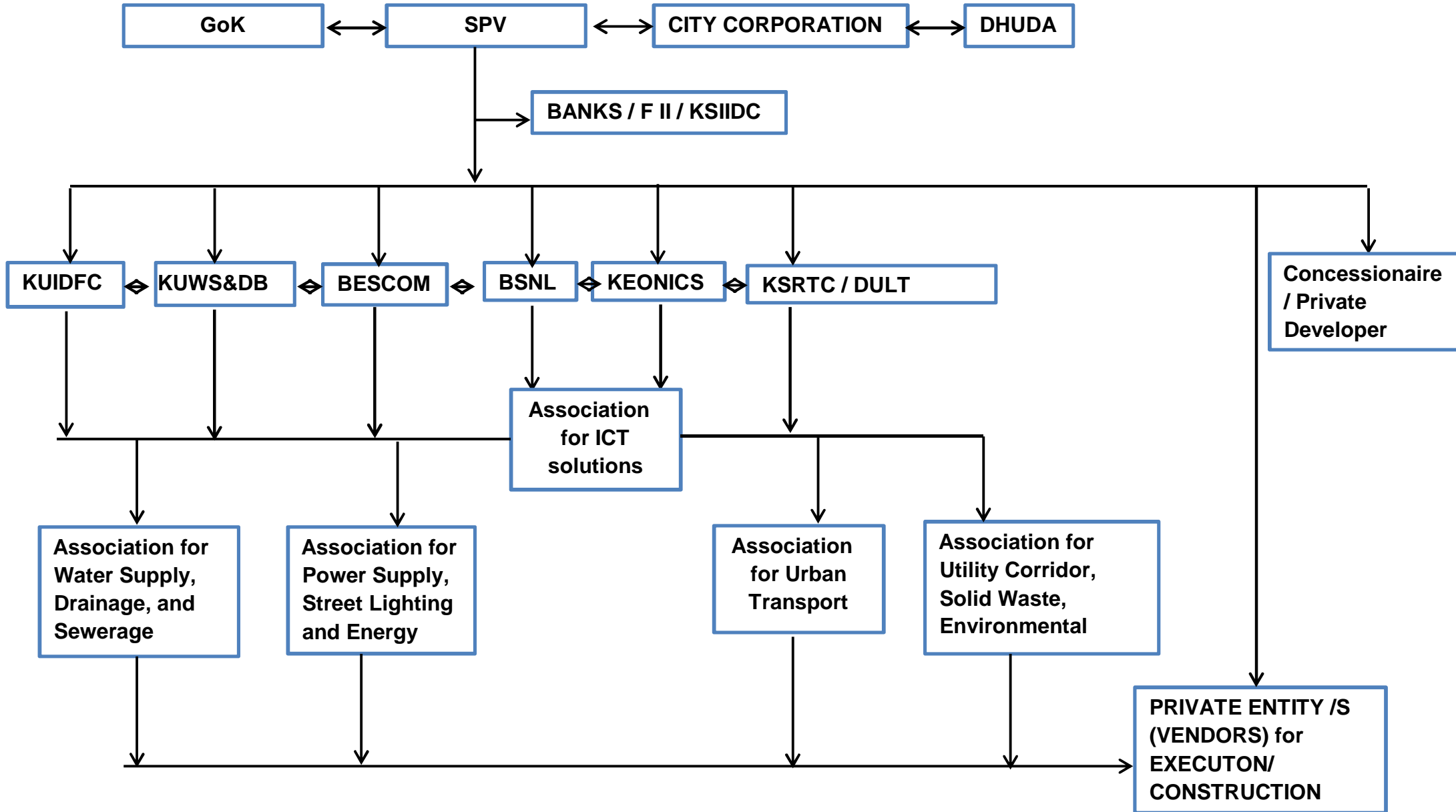
It was wonderful to discuss Smart City initiatives with you this afternoon. We would like to take this opportunity to thank you in expressing your interest in partnering Davanagere City Corporation for its Smart City Mission Programme. We would like to take this further and would like to have a conforming email in this regard so that we do set out a programme of activities to forge a mutually beneficial partnership.

Looking forward to hear from you at the earliest

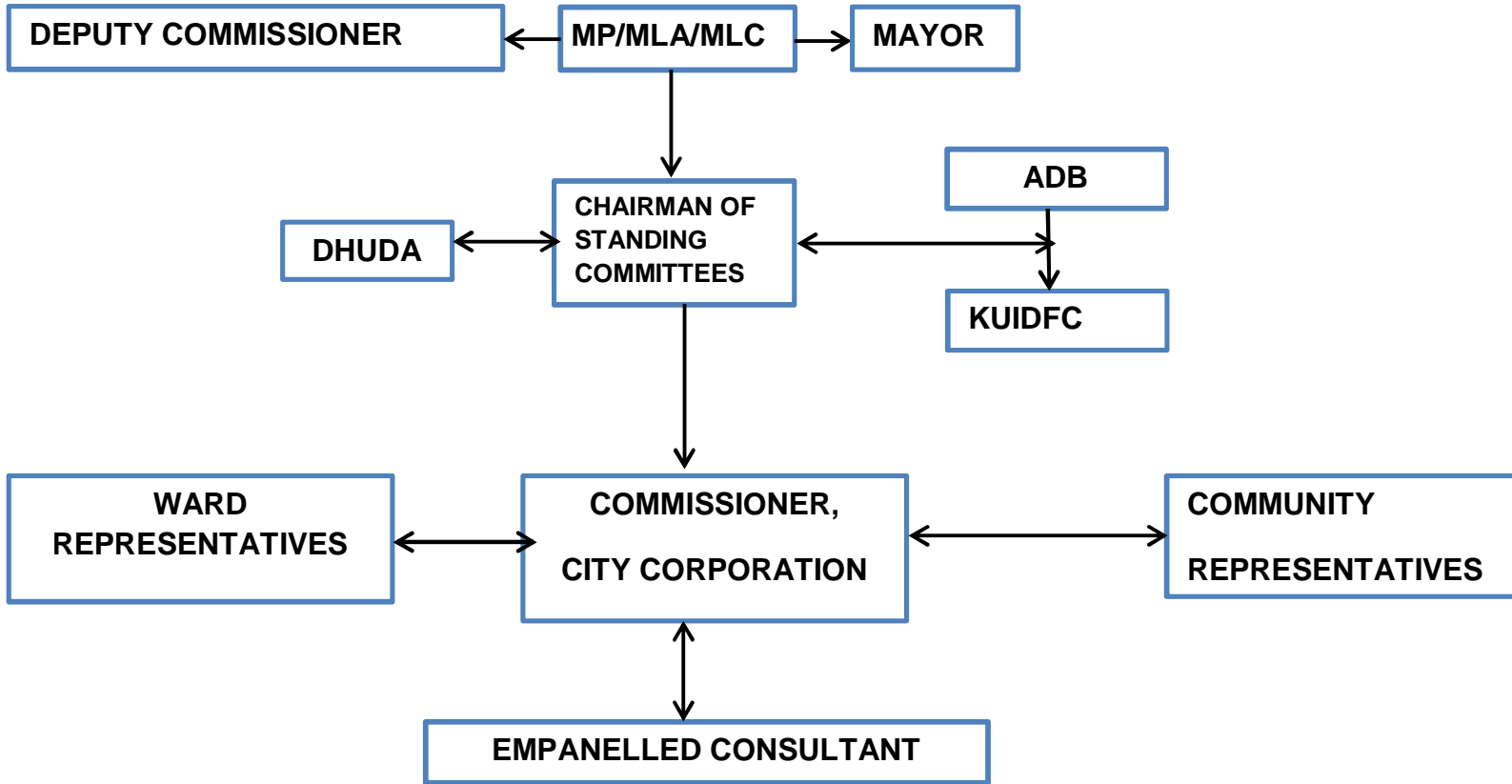
Thanks
Commissioner
Davanagere City Corporation

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Annexure – 3 Answer to Q no. 34



Annexure – 3 Answer to Q no. 36



ANNEXURE NO: 4 Serial No. 10

SUGGESTIVE FUNDING PATTERN OF SMART CITY MISSION PROGRAMME AND CONVERGENCE WITH OTHER GOVERNMENT SCHEMES & SOURCES OF FUND (all figures in Rs. Crores)													
Project Precinct	Indicative Project Cost	Source of Fund										Remarks	
		GoK - Smart City Funding	Gol - Smart City Funding	ULB - Own Source	PPP Funding	Gol - AMRUT	Gol - Swatch Bharat	Gol - Other Schemes	GoK - State Schemes & Proposals	ADB Funding	Others		
AREA BASED DEVELOPMENT													
Rejuvenation of Mandakki Bhatti	372.90	205.09	155.05	10.00	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
GPS & RFID Based Integrated Bin Less Solid Waste Management System	37.01	10.00	12.66	10.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Dedicated Footpath, Cycle Tracks, Information Kiosks, Intelligent Solar Street Lights	43.53	39.51	2.75	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Underground Utility Corridor with sensors	50.96	45.86	2.55	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Old City Bus Redevelopment with Integrated Command Centre for Smart City	25.00	17.50	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Mandipet Area - Economic Rejuvenation	102.91	23.80	23.80	0.00	55.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Heritage Block	6.67	5.89	0.14	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Underground Drainage Facility	161.01	80.50	33.26	7.25	0.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Rooftop Solar Panels	9.40	0.00	0.00	0.00	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Open parks & Spaces	11.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.53	0.00	0.00	0.00	Cost outlay supported by Department of Horticulture, GoK. This component not considered in Smart City proposal
TOTAL OUTLAY INCLUDED IN SMART CITY PROPOSAL in ABD	809.38	428.15	237.70	31.72	67.46	40.00	4.35	0.00	0.00	0.00	0.00	0.00	<i>Area based indicative project outlay as considered under Smart City Programme</i>
PAN CITY DEVELOPMENT													
ICT enabled E-Governance System on GIS	38.44	0.00	38.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Part of Smart City Proposal
Intelligent Urban Mobility System & Secured Environment	459.35	61.36	205.86	11.48	100.10	0.00	0.00	0.00	80.56	0.00	0.00	0.00	Part of Smart City Proposal
24x7 Smart metered water supply	490.49	0.00	0.00	24.52	0.00	100.00	0.00	0.00	182.98	182.98	0.00	0.00	Project under advance stage of implementation under "Jalabri" Scheme of Government of Karnataka in 2 phases. Hence not considered in Smart City proposal
Upgradation of City Road Network	220.83	0.00	0.00	61.61	0.00	0.00	0.00	0.00	159.22	0.00	0.00	0.00	Project under advance stage of implementation under Government of Karnataka Schemes and PWD funding. Hence not included in Smart City Proposal
Improvement of Parks & Open spaces	58.00	0.00	0.00	0.00	0.00	29.00	0.00	0.00	29.00	0.00	0.00	0.00	Project proposed to be implemented through AMRUT. Cost outlay covered in those schemes & hence not considered in Smart City proposal
Improvement of Electricity Supply & underground cabling	83.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.00	0.00	0.00	0.00	Phase wise development considered with initial outlay by BESCOM in area outside the area identified for Area Based Development. It is proposed to be aligned with underground utility corridor as proposed in the Smart City area development proposal
Inclusive Housing	15.00	0.00	0.00	0.00	0.00	0.00	0.00	9.00	0.00	0.00	6.00	0.00	Implementation happening through Vajpayee housing Scheme supported by Bank Loan & Beneficiary contribution
Slum Redevelopment	84.80	0.00	0.00	0.00	0.00	0.00	0.00	42.40	42.40	0.00	0.00	0.00	Implementation through Housing for All Scheme of Gol. Outlay covered and hence not considered in Smart City Proposal
Sanitation & Community Toilets	12.66	0.00	0.00	5.95	0.00	0.00	5.05	0.00	1.66	0.00	0.00	0.00	Five year programme being implemented under Swatch Bharat Mission. Outlay covered for target and hence not considered in Smart City Proposal
TOTAL OUTLAY INCLUDED IN SMART CITY PROPOSAL-Pan City	497.79	61.36	244.30	11.48	100.10	0.00	0.00	0.00	80.56	0.00	0.00	0.00	<i>Pan City indicative project outlay as considered under Smart City Programme</i>
TOTAL INDICATIVE OUTLAY FOR SMART CITY PROPOSAL (ABD+Pan City)	1307.18	489.51	482.00	43.20	167.56	40.00	4.35	0.00	80.56	0.00	0.00	0.00	<i>Total Indicative Project Outlay considered under Smart City Programme</i>
TOTAL ONGOING PROJECT OUTLAY FOR DEVELOPMENT OF THE CITY (Not within Smart City Proposal)	976.31	0.00	0.00	92.08	0.00	129.00	5.05	51.40	509.79	182.98	6.00	0.00	Ongoing development projects happening in the city which shall be an enabler for the Smart City Mission Programme

ANNEXURE NO: 4 Serial No. 11

INDICATIVE SMART CITY PROJECT PHASING: COMPONENT WISE											
FOR AREA BASED DEVELOPMENT						FOR PAN CITY DEVELOPMENT					
Project Precinct	Phasing in years with year-wise outlay					Project Precinct	Phasing in years with year-wise outlay				
	Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5
Rejuvenation of Mandakki Bhatti	74.58	74.58	74.58	18.64	130.51	ICT enabled E-Governance System on GIS	38.44	0.00	0.00	0.00	0.00
GPS & RFID Based Integrated Bin Less Solid Waste Management System	18.50	18.50	0.00	0.00	0.00	Intelligent Urban Mobility System & Secured Environment	91.87	91.87	137.81	137.81	0.00
Dedicated Footpath, Cycle Tracks, Information Kiosks, Intelligent Solar Street Lights	6.53	13.06	13.06	10.88	0.00	TOTAL	130.31	91.87	137.81	137.81	0.00
Underground Utility Corridor with sensors	5.10	10.19	7.64	17.84	10.19	Remarks: Project phasing has been aligned with the funding allocation as envisaged in the Smart City Mission Programme wherein every year Rs 100 crore tranche of funding from Government of India and Government of Karnataka is envisaged & pledged. After which, priority and replicability factor of each individual project component is envisaged and taken into account. Hence, ICT & E-Gov for Pan City is phased in the initial first year whereas rejuvenation of Mandakki Bhatti is spread over years as it is a phased wise development. PPP funded projects are envisaged to be initiated in the initial stages but rooftop solar panels will have to wait till development till roof is achieved. The rooftop solar revenue potential of around 10MW is not considered in the current SCP revenue stream and is treated as a reserve source potential included in the fund generation capacity of the SPV for project replication in phases					
Old City Bus Redevelopment with Integrated Command Centre for Smart City	3.75	3.75	7.50	10.00	0.00						
Mandipet Area - Economic Rejuvenation	36.40	41.16	25.34	0.00	0.00						
Heritage Block	3.34	3.34	0.00	0.00	0.00						
Underground Drainage Facility	32.20	24.15	32.20	32.20	40.25						
Rooftop Solar Panel (other than Mandakki Bhatti)	0.00	0.00	0.00	4.70	4.70						
TOTAL	180.40	188.73	160.33	94.27	185.66						

FUND COVERAGE FOR THE WHOLE SMART CITY PROPOSAL YEARWISE OF IMPLEMENTATION								
PARTICULARS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	Total Funding	Balance	Remarks
Total Fund requirement	310.71	280.60	298.13	232.07	185.66	1307.18	0.00	
Fund Release - year wise								
Smart City Fund - Govt. Of India	100.00	100.00	100.00	100.00	82.00	482.00	18.00	Total Fund as pledged for Smart City programme is not included in project funding. Around Rs. 28.49 crores is not utilized which may be used for covering any overheads/O&M or may be used as a corpus for further economic generation
Smart City Fund - Govt. of Karnataka	100.00	100.00	100.00	100.00	89.51	489.51	10.49	
Fund from other GOI Schemes	10.17	10.17	8.00	16.00	0.00	44.35	0	Convergence achieved. Funds from AMRUT and SWATCH BHARAT used only
Fund from other GoK Department	20.14	12.08	40.28	8.06	0.00	80.56	0	Funding from KSRTC envisaged as per their proposal pertaining to Smart City
Private Sector Fund	75.40	55.30	36.86	0.00	0.00	167.56	0	Replicable sector identified where private sector funding with attached revenue stream is envisaged
ULB funding	4.99	3.05	12.99	8.02	14.15	43.20	0.00	City corporation to chip in for development with nearly 3% (less than 5%) of total outlay and to be used as a bridge capital funding process
TOTAL RELEASE	310.71	280.60	298.13	232.07	185.66	1307.18	0.00	Total requirement matched with total year wise funding sources

SUMMARY OF FINANCIAL PLAN (Fig in Rs crores)					% of Smart City outlay with City wide development plans clubbed with Smart City	Remarks
Parameter	Usage Pattern					
	Pan City	Area Based	Total	% of Total Outlay - Smart City		
TOTAL INDICATIVE PROJECT COST	497.79	809.38	1307.18	100%	57%	The City is already implementing various developmental works like 24x7 water supply, Road Improvement, Parks & Open spaces, Inclusive Housing, Housing for all, Slum Redevelopment, Sanitation etc. This outlay of nearly Rs. 976 crores and is an enabler for Smart City and when this is nearly 75% of Smart City Project Outlay
Smart City Fund	31%	69%	971.51	74%		
PPP Funding	60%	40%	167.56	13%		
Convergence with GoI & GoK Schemes	64%	36%	124.91	10%		
ULB Funding from own source	27%	73%	43.20	3%		

ANNEXURE NO: 4 Serial No.12

PROJECT SUSTAINABILITY THROUGH COVERAGE OF O&M AND GENERATION OF ADDITIONAL FUNDS FOR FURTHER PROJECT REPLICABILITY IN PHASE WISE MANNER																															
INDICATIVE OPERATIONS AND MAINTENANCE COSTS YEAR WISE OF ALL PROJECT PRECINCT PROPOSED IN SMART CITY PROPOSAL (all figures in Rs. Crores)																															
Project Precinct	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	TOTAL
Area Based Development Projects	1.75	3.77	4.00	4.22	4.66	7.17	7.98	8.72	9.16	9.55	9.95	10.45	10.90	11.37	11.94	12.54	13.17	13.82	14.51	15.24	16.00	16.80	17.64	18.52	19.45	20.42	21.44	22.52	23.64	24.82	386.15
Pan City Development Projects	0.00	5.23	6.78	8.34	10.26	12.46	16.87	19.33	19.56	19.80	21.78	22.05	22.32	24.56	24.87	25.19	27.71	28.06	28.43	31.28	31.69	32.12	35.33	35.80	36.30	39.93	40.47	41.05	45.15	45.78	758.48
Total	1.75	8.99	10.79	12.57	14.91	19.63	24.85	28.05	28.71	29.34	31.74	32.50	33.22	35.93	36.81	37.72	40.87	41.89	42.95	46.52	47.69	48.92	52.97	54.33	55.75	60.35	61.92	63.57	68.79	70.60	1144.62
INDICATIVE REVENUE ESTIMATION FROM ALL PROJECT PRECINCTS PROPOSED IN THE SMART CITY PROPOSAL (all figures in Rs. Crores)																															
Area Based Development Projects	1.20	1.60	2.58	4.70	8.08	8.92	8.94	9.87	9.89	10.92	11.86	11.87	12.09	13.12	13.13	13.38	14.53	14.53	14.82	16.08	16.09	16.42	17.80	17.81	18.20	19.72	19.73	20.17	20.17	366.88	
Pan City Development Projects	1.55	7.02	12.67	15.54	21.04	27.94	30.71	30.75	30.83	33.89	33.94	34.04	37.41	37.48	37.60	41.32	41.41	41.57	45.69	45.81	46.00	50.56	50.72	50.97	56.02	56.23	56.55	62.15	62.44	62.85	1162.69
Total	2.75	8.62	15.25	20.24	29.12	36.85	39.65	39.69	40.69	43.78	43.83	44.96	49.27	49.34	49.69	54.45	54.95	60.22	60.34	60.83	66.64	66.80	67.39	73.82	74.04	74.75	81.87	82.16	83.02	1529.57	
INDICATIVE COVERAGE OF OPERATIONS & MAINTENANCE COST THROUGH REVENUE GENERATION: ONLY REVENUE FROM SUCH SOURCES ASSUMED FOR WHICH O&M IS CONSIDERED (all figures in Rs. Crores)																															
Excess Revenue after coverage of O&M	0.99	-0.37	4.47	7.67	14.21	17.22	14.80	11.64	11.98	14.44	12.09	12.46	16.05	13.41	12.88	16.72	13.67	13.07	17.27	13.82	13.14	17.72	13.83	13.07	18.07	13.70	12.84	18.30	13.37	12.42	384.95
Cumulative Excess Revenue after coverage of O&M	0.99	0.62	5.08	12.76	26.96	44.19	58.99	70.63	82.61	97.05	109.14	121.60	137.65	151.06	163.94	180.67	194.34	207.40	224.67	238.50	251.63	269.35	283.19	296.25	314.32	328.02	340.86	359.16	372.53	384.95	5329.13
INDICATIVE EXCESS REVENUE THAT CAN BE LEVERAGED BY SPV FOR FURTHER ECONOMIC GENERATION OR PROJECT REPLICABILITY (60%, 55% 40% RETAINMENT BY SPV FOR ITS INTERNAL FINANCIAL OBLIGATION IN FIRST 3, 5 AND REST OF YEARS): ESTABLISHMENT OF SUSTAINABILITY																															
Year wise leverage of fund	0.00	0.00	0.00	3.07	5.68	6.89	7.40	5.99	7.22	6.65	5.99	8.82	7.37	7.09	9.20	7.52	7.84	10.36	8.29	7.88	10.63	8.30	7.84	10.84	8.22	7.70	10.98	8.02	7.45	230.97	
Cumulative fund available for leverage	0.00	0.00	0.00	3.07	8.75	15.64	23.04	28.86	34.85	42.07	48.72	55.58	64.40	71.78	78.86	88.06	95.58	103.42	113.78	122.08	129.96	140.59	148.89	156.73	167.57	175.79	183.49	194.47	202.50	209.95	2708.50
The Revenue streams attached with the proposed project precincts are in a cumulative manner self-sustainable and over and above covering O&M requirements, is able to generate funds having a cumulative value of Rs. 2708 crores. Certain risk factors are there like non-payment of user fee by Citizens but it is minimized through other interventions like PPP and guaranteed revenue like advertising etc. Also, ULB's other source of income is not at all considered here which shall also be strengthened through ICT interventions																															
FUND GENERATED FOR FURTHER PROJECT DEVELOPMENT ON ITS OWN BY THE SPV																															
Indicative potential revenue from Rooftop solar initiative in area based development	0.00	0.00	0.00	0.00	0.00	10.53	10.53	10.53	10.53	10.53	11.05	11.05	11.05	11.05	11.60	12.18	12.79	13.43	14.11	14.81	15.55	16.33	17.15	18.00	18.90	19.85	20.84	21.88	22.98		
Cumulative revenue potential from rooftop solar initiative in area based development	0.00	0.00	0.00	0.00	0.00	10.53	21.05	31.58	42.10	52.63	63.68	74.73	85.78	96.84	107.89	119.49	131.68	144.47	157.91	172.01	186.82	202.37	218.70	235.85	253.85	272.75	292.60	313.44	335.32	358.30	
Interest earned on the amount available for leverage	0.00	0.00	0.00	0.15	0.44	1.31	0.90	1.71	2.54	3.43	4.31	5.21	4.47	5.39	6.30	7.34	8.32	9.36	1.19	2.31	3.44	4.75	5.99	1.25	2.69	4.05	5.42	7.02	26.89	1.52	
Amount available for leveraging in phases of 5 years	0.00	0.00	0.00	3.22	9.19	27.48	44.99	62.16	79.50	98.13	116.72	135.52	154.66	174.01	193.05	214.89	235.58	257.25	272.88	296.40	320.23	347.72	373.58	393.83	424.11	452.59	481.52	514.93	564.71	569.77	
Amount of debt available in phases of 5 years	0.00	0.00	0.00	0.00	0.00	64.11	0.00	0.00	0.00	0.00	0.00	28.46	0.00	0.00	0.00	0.00	0.00	600.24	0.00	0.00	0.00	0.00	0.00	918.93	0.00	0.00	0.00	0.00	0.00	1329.46	
Total Fund available for replication of projects in 5 year phases	0	0	0	0	0	91.59	0	0	0	0	0	163.98	0	0	0	0	0	857.49	0	0	0	0	0	1312.76	0	0	0	0	0	1899.22	4325.04
The in-built design of the financial paradigm of the Smart City proposal is indicatively capable of generating lumpsum fund every 5 years to accommodate further project development on its own. As in this case, external commercial borrowing is considered, hence a 5 year time frame is considered to accommodate the repayment terms through the revenue sources created by the new projects. Also, the amount retained by the SPV is considerable enough to furnish the debt (which is nearly 50% of total excess revenue generated). Hence, replicability of projects through SPV's own fund generation is ensured. In its 30 year time frame, the SPV is capable of generating Rs. 4325 crores of fund further. Also, it is to be noted that the SPV is backed by a total asset worth of over Rs. 900 crores after 5th year and this also can be leveraged to generate further fund. But this will create additional stress on asset and hence, it is proposed to expose not more than 20%-25% of asset for leveraging																															

INDICATIVE EMPLOYMENT GENERATION AND ECONOMIC BENEFITS DUE TO SMART CITY MISSION

Parameters	Details	New Segments Created	Capacity enhancement of segments
Indicative Employment Generated	15000	Solar market, Engineering Maintenance, Software, Data & Call Centre, Finance, E-Vehicles market	SMEs, Agro Based Trade, Gold & Textile Trade, Retail, Hospitality
Indicative Annual Addition to Local Economy	Rs. 160 crores		
Cumulative addition to local Economy in 10 years	Rs. 2007 crores		
Indicative enhancement in Local per capita income by	3%-5%		

SUSTAINABILITY OF SELECT PPP INITIATIVES CONSIDERED IN THE SMART CITY PROPOSAL

Project Precinct	Indicative Project Cost in Rs. Cr	Project IRR	Equity IRR	Project NPV over 30 years
Mandipet Area Economic Rejuvenation	55.31	12.43%	16.62%	Positive
MLCP & Commercial Complex	59.25	13.22%	16.27%	Positive

SUSTAINABILITY OF CITY CORPORATION THROUGH SMART CITY INITIATIVE

Parameter	Current Level	Achievement through Smart City Intervention	Additional Revenue/year	Remarks
Avg Revenue Collection vis a vis Demand	64.72%	95%	Rs. 11.33 crores	Achievement through Pan City ICT & E-Governance Initiative
Inflow from Smart City SPV	NA	Avg of 20%, 18% & 15% of additional Revenue shared with ULB	Rs. 1.25 crores	Assumed that 20%, 18% & 15% of additional revenue receipts after covering O&M expenses flows back to ULB in different phases
Water Revenue due to metering	NA	Smart Metering Initiative	Rs. 15.00 crores	Potential of additional revenue due to telescopic charges applicable through metering
Trade License	Rs. 10 lac	Due to enhancement in economy & revision in fees	Rs. 0.16 crores	Potential of new addition due to enhanced activities in retail & commercial activities
Others	NA	User fee enhancement due to revision in FAR and other user charges	Rs. 3.00 crores	A lumpsum amount considered which may be achieved through building plan sanction, enhanced FAR fees etc which may be added in phase wise manner
TOTAL			Rs. 30.74 crores	Rs. 27 crores of additional fund that the ULB is capable to generate due to Smart City initiative which is more than the average ULB fund