

Annexure II – Belagavi Smart City Proposal

A	B	C	D	E	F	G	H	I	J	K
Sl. No	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-3: 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.	Engagement of Belgaum citizens in shaping public programmes has started in 1993 itself for projects of hospital waste in 1193, for rejuvenation of open wells 1994, for urban garbage on ppp mode in 2005, 24x7 water supply as pilot project in 2005-09; In 2011 for vision document 2040 preparation;	Scenario-4: City constantly conducts citizen engagement with people at each Ward level to incorporate their views, and these shape priorities and development projects in the city. Multiple means of communication and getting feedback such, both face-to-face and online are utilized. The effectiveness of city governance and service delivery is constantly enhanced on the basis of feedback from citizens.	Taking forward the experience of citizen engagement for different projects from 1993 onwards and experience gained in conducting the citizen engagement by various mediums including mobile app and internet for every citizen upto ward level in smart city plan preparation, the same procedure will be adopted for all future projects;
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-2: Historic and cultural resources are preserved and utilized 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.	Belagavi has historical fort which is more than 800 years old with historical temples, mosque, Ramakrishna ashram inside the fort. The extent of fort is 144 acres. Because of limited resources the heritage monuments, fort structure, moat and surrounding area of fort are not maintained properly. The state government declared the fort as a heritage structure which needs to be preserved and showcased.	Scenario-4: Built, natural and intangible heritage are preserved and utilized 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.	The preservation proposal of Fort consists of 1. Restoration of fort wall in consultation with ASI. 2. Development of Moat 3. Development of recreational park around moat. 4. Development of Amphitheatre and district museum. 5. Creation of walkability and encouraging non motorized vehicles inside fort 6. Development of open spaces and public buildings to reflect local identity and utilization of the same for public events.

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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 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.		Scenario-4: 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.	Opportunity generation through development of Flatted Factories, Multi Utilities Facilitation Centers, Modern markets, skill development centres, IT incubation center, and hawkers zones. Also with the proposals in Smart City Project, there will be overall economic development in the entire city which creates direct and indirect jobs.
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: 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, and teacher - student ratio, facilities available and other factors.	- Belgavi is an educational hub – with three Universities, six medical colleges and several technical colleges. The Karnataka States’ apex university for technical education the Vishveshwarayya Technological University is located in Belgavi. - The KLE Society, now in its 100th year – which runs 238 educational institutions in Karnataka, Maharashtra and Delhi is founded and based in Belgavi.	Scenario-4: City provides adequate and high-quality education facilities within easily reachable distance of 10 minutes walking for all the residential areas of the city and provides multiple options of connecting with specialized teaching and multimedia enabled education. Education facilities are regularly assessed through database of schools including number of students, attendance, teacher-student ratio, facilities available and other factors.	In Smart City proposal, under ICT initiatives education facilities are regularly assessed through data base of schools including number of students, attendance, teacher student ratio, facilities available and other factors.

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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: 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.	'- Belgavi is renowned for its healthcare and some 10,000 beds – the highest per capita in all Karnataka provide primary to advanced medical care'; There are total six medical institutions are available;	Scenario-4: 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 specialized health advice with maximum convenience. The city is able to foresee likely potential diseases and develop response systems and preventive care.	Provision for Trauma Centers at key locations and ICT connectivity for all health centers.
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	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	Most parts of the city have housing, retail, and office buildings in close proximity. Some neighborhoods have light industrial uses within them (e.g., auto repair, craft production). Land use rules allow for mixed uses.	Every part of the city has a mix of uses. Everyone lives within a 15-minute trip of office buildings, markets and shops, and even some industrial uses. Land use rules require or encourage developers to incorporate a mixture of uses in their projects.	Scenario-3: 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.	BUDA as planning authority has made provision for mixed land use under zoning regulation. Reference clause attached under annexure. Clause-VII Descriptions-1: Application of land use under zonal regulations of Belgaum Master Plan 2021.	Scenario-4: 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.	Under Smart city, flatted factories are proposed in the areas where mixed land use are available; Provision for Multi Utility Facilitation Centres at six locations, modern markets two locations, Hawkers zones and east street.

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			use regulations prevent putting commercial or office locations in residential neighborhoods and vice versa.	are made when requested.						
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	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 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-3: 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.	CCB has encouraged development of under-utilized parcels of lands in order to accommodate high density and promoting the walkable areas.	Scenario-4: 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. .	As a long term strategy it is proposed to develop the city within proposed outer ring road as a belt promoting the compactness and densification. Under Smart City it is proposed to Develop under utilized land parcels for construction of Multi Utility facilitation centres at Six locations of ULBs land. Development of existing markets to Modern markets. Development of Bus terminal and footpaths. Affordable housing scheme for EWS and LIG.

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			developments at the periphery tend to be large-scale residential developments, often enclosed with a gate and oriented to the automobile.	the periphery tend to be large-scale residential developments, often enclosed with a gate and oriented to the automobile.						
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: 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 neighborhoods.	CCB has several open spaces located at various parts of the city. park- 40, Play grounds-9, others as open spaces-9 (gardens/parks) .	Scenario-4: 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.	Under Smart City, Parks & Recreational Spaces through Improvement of Neighborhood Parks & Recreational Spaces, Development of Heritage Park at Vaccine Depot - Tilakwadi. Development of fort and precinct. Plazas are planned at all Multi Utility Center locations.
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	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	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	A wide range of 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-3: 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-	Housing demand is neutral with consistent supply from KHB schemes and other private schemes. Provisions made for LIG and HIG in Govt and private schemes through provision under DCR (10% provision). CCB is	Scenario-4: 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	Development of Affordable Housing for EWS.

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			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.	middle class have housing that meets their needs at costs appropriate to their income. The poor live in informal settlements.	and middle-income people can find housing in areas that are conveniently located.		income people can find housing in areas that are conveniently located.	providing housing for 7 slums with 1044 nos of Houses. Cost Rs 47.51 Cr.		
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-3: Network of streets are fairly complete. Public transport covers most areas of the city. However last mile connectivity remains incomplete and affects transport options. Foot paths are accessible in most areas, whereas concerns of safe crossings and security throughout the day remain. Parking zones are demarcated but absence of pricing increases over utilization of parking lots.	Service Coverage of urban transport in the city-0.63 LOS 3. Availability of urban transport per 1000 population-0.28 with LOS 3.	Scenario-4: 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.	Under Smart City plan it is proposed to have road improvement through provision of cycle tracks, footpaths with street furniture, junction improvement. Provision of public transport with ITS, smart bus shelters. Improvement of Central Bus Terminus. Provision of paratransit facilities, smart parking facilities. Development of Integrated Intelligent Transport System.
11	Walkable	A Smart City's roads are designed	The city is designed mainly	Older areas of the city see a mix of	The city has a good network of	The city is highly walkable. Pavements	Scenario-3: The city has a good	Road length of pucca road=809 km.	Scenario-4: The city is highly	Under Smart City Plan provision given for

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		<p>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)</p>	<p>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</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>footpaths, street furnitures, avenue plantation,UG Ducting, UG- HT & LT Line and street lighting. Provision of cycle track at major roads. Junction improvement at six locations. Provision of traffic signals and road signages.</p>	
12	IT connectivity	<p>A Smart City has a robust internet network allowing high-speed connections to all offices and dwellings as desired. (Guideline 6.2)</p>	<p>City has no major plans to bring increased high speed internet connectivity to the public.</p>	<p>The city has made plans to provide high speed internet connectivity through the existing framework.</p>	<p>The city makes has high speed internet connectivity available in most parts of the city.</p>	<p>The city offers free wifi services to provide opportunity for all the citizens to connect with high speed internet across the city.</p>	<p>Scenario 2; The city has made plans to provide high speed internet connectivity through the existing framework.</p>	<p>Entire city covered under operators like reliance, BSNL broadband network.</p>	<p>Scenario-4: The city offers free Wi-Fi services to provide opportunity for all the citizens to connect with high speed internet across the city.</p>	<p>Proposal for covering entire city with WiFi in ICT initiatives;</p>

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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: 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.	Online birth and death record view, complaint registration, GIS based property tax information system. Information of schemes like NULM, ISHUP, AKM, SBM.	Scenario-4: 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.	Central Command Center and E-Governance with integration of all the services and centres, Smart Metering for Electricity, Smart Metering Water Supply/UGD, Traffic and Transportation, Safety and Security features are proposed in ICT initiatives on Pan City Basis.
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-2: Electricity supply and loads are managed as per demand and priority for various functions with clear scheduling, with electricity being available in many areas for most hours of the day.	Planned load shedding slotwise published by HESCOM. Changes in schedule seasonwise. At present 2 hours every day divided in slots across Belagavi region.	Scenario-4: Electricity is available 24 x 7 in all parts of the city with smart metering linked to online platforms for monitoring and transparency.	It is planned to generate the renewable component of the energy generation pattern through establishing more wind mills and solar roof top panels by 402.20 MU by 2020. Smart Energy metering are proposed under smart city project.
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 preparing plans for ensuring that it gets more energy from renewable sources and is in the process of making commitments in this regard.	KREDL Proposal for roof top SPV power capacity at 10 water pumping stations and vacant land of KUWS&DB with capacity of 1.5 MW & 3.0 MW with cost of 13.26 Cr and Rs 21.0 Cr respectively.	Scenario-4: 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.	It is planned to generate the renewable component of the energy generation pattern through establishing more wind mills and solar roof top panels by 402.20 MU by 2020.

Annexure II – Belagavi Smart City Proposal

A	B	C	D	E	F	G	H	I	J	K
Sl. No	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)
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 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%.	Coverage of water supply 75%. Per capita supply-110 LPCD, 24x7 water supply in 10 wards, once in 4 days 46 wards. Planned to cover 24x7 for entire city. Present UFW 28%. Source: SLB 2015.	Scenario 4: 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%.	24x7 Water Supply: Developer appointed for implementing 24x7 water supply on pan city basis which is performance based tender with unaccounted loss of water less than 15%. It is proposed to install Smart Water Meters under Smart City Project;
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 runoff.	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 utilized through the city and storm water is collected and stored in water bodies and treated for usage. Recycled waste water is supplied for secondary uses.	Scenario 1: 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 runoff.	Extent of metering in 18% of connections, Extent of reuse of waste water is 0% Source: SLB-2015	Scenario 4: The city has meters for all its water supply. It includes smart mechanisms to monitor remotely. Rainwater harvesting systems are installed and utilized 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	Smart meters are proposed under smart city project for entire city. 24x7 water supply will be made available in next 3 years time with world bank funding; All the storm water is collected through primary and secondary drains and used for recharge of water bodies.
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 1: The city is unable to treat all its sewage. Many local sewer lines open on to water bodies and open ground and pollute the environment.	City does not have STP and entire wastewater is being disposed into Bellary nallah.	Scenario 3: All the waste water is collected and treated before disposal. It is also treated to a high standard and some is recycled.	Provision of sewer network and modern STP is proposed. Already Rs. 155 crore sanctioned under AMRUT.
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	City has programs and projects to monitor air quality and spatialising the data to ascertain	City has programs and projects to monitor air quality and spatialising the data to ascertain	The city has clean air by international standards. Live Air quality monitoring cover the entire city and data of	Scenario 1: City does not have plans, policies or programs to improve the air quality. Systems to	Though there are no monitoring stations at present, Belagavi is having abundant green cover with big trees	Scenario-3: City has programs and projects to monitor air quality and specializing the data to ascertain	City is planning to put monitoring stations in place in important junctions. Provision of cycle tracks and

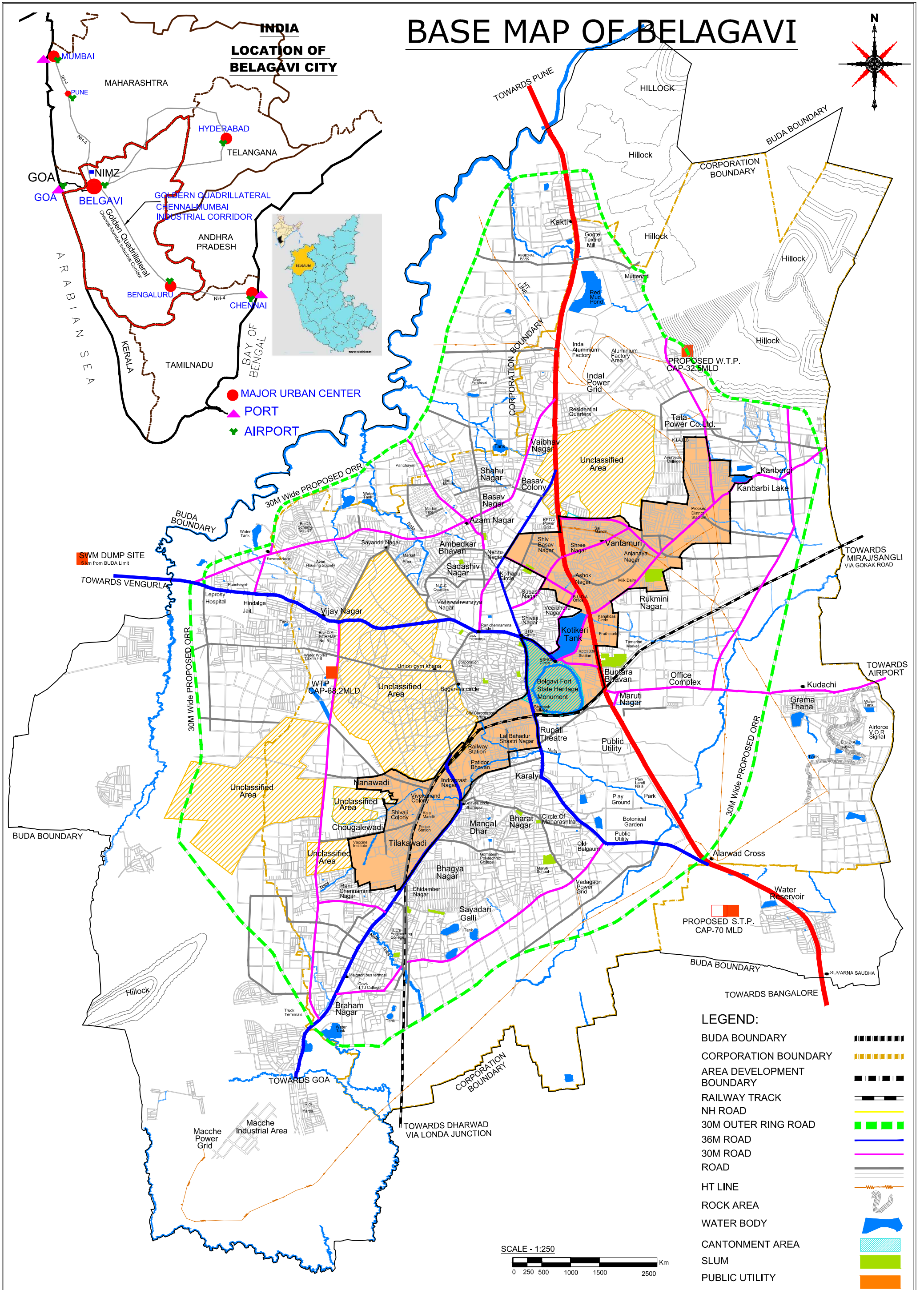
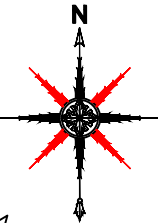
Annexure II – Belagavi Smart City Proposal

A	B	C	D	E	F	G	H	I	J	K
Sl. No	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)
			to monitor air quality are absent.	reasons for degrees of pollution in the air. A few strategies to decrease air pollution have been implemented.	reasons for degrees of pollution in the air. Pollution levels are acceptable.	air quality are mapped.	monitor air quality are absent.	along the roads, cantonment area with 80% green cover due to which the environment is in pristine conditions. However, city is planning to procure the monitoring stations for base line data and to keep the pollution levels under check.	reasons for degrees of pollution in the air. Pollution levels are acceptable.	dedicated bus lanes, footpaths can encourage NMT and public transport. Thereby reducing the air pollution.
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 city promotes energy efficiency and some new buildings install energy efficiency systems that track and monitor energy use and savings.	Solar panels in KLE Medical college and hospital, Angadi college of engineering.	Scenario 4: 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.	Under smart city plan it is proposed to have Solar Roof Top system at institutions and government offices and making bylaws to make it mandatory for all new flat roof buildings to install solar roof top panels.
21	Underground electric wiring	A Smart City has an underground electric wiring system to reduce blackouts due to storms and eliminate unsightliness. (Guideline 6.2)	City does not have plans for underground electric wiring system.	More than 40% of the city has underground electric wiring system.	More than 75% of the city has underground electric wiring system.	More than 90% of the city has underground electric wiring system.	Scenario-2: More than 40% of the city has underground electric wiring system.	Ongoing-11 KV line Underground cabling. Project cost Rs 316.27 Cr.	Scenario-4: More than 90% of the city has underground electric wiring system.	Laying of HT Underground lines is already in progress for entire city. Proposals for Underground Utility ducting and Underground LT Lines are taken up in next 10 year's time;
22	Sanitation	A Smart City has no open defecation, and a full supply of toilets based on the	Many parts of the city do not have access to sanitation	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-3 : Sanitation facilities are available to 90% of the city's population.	93% Based on SLB-2015	Scenario 4: Sanitation facilities are available to 100% of the city's population.	Works are being taken up for Construction of Sewage Treatment Plant catering to entire city

Annexure II – Belagavi Smart City Proposal

A	B	C	D	E	F	G	H	I	J	K
Sl. No	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)
		population. (Guidelines 2.4.3 & 6.2)	infrastructure and facilities.							and sewer network for under covered areas with cost of Rs 200 crore; Provision of Public Urinals & 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: Waste generated is usually collected but not segregated. Recycling is attempted by difficult to implement.	Extent segregation of municipal solid waste - 20% (SLB-2015) Compost plant capacities 100 TPD.	Scenario 4: 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.	Proposals for implementation: Segregation of Waste and establishing a RDF Plant for Waste to Energy.
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 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.	Separate Police commissionerate has been setup in Belagavi city. Total eight police stations and one dedicated women police station is available. City is having better safety conditions and there is reduction in the cognizable cases and fatal road accidents; Women helpline center and child help line center added; Night patrolling is being provided throughout city. Auto drivers have been provided identitycards.	Scenario-4: 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.	Provision of surveillance cameras at all junctions and streets, provision of high mast lights and street lights, monitoring in central command area using ICT.

BASE MAP OF BELAGAVI



INDIA
LOCATION OF BELAGAVI CITY

MAHARASHTRA
 TELANGANA
 ANDHRA PRADESH
 KERALA
 TAMILNADU

MUMBAI
 PUNE
 HYDERABAD
 BENGALURU
 CHENNAI

GOA
 BELGAVI

GOLDEN QUADRILATERAL
 CHENNAI-MUMBAI
 INDUSTRIAL CORRIDOR

ARABIAN SEA
 BAY OF BENGAL

MAJOR URBAN CENTER
 PORT
 AIRPORT

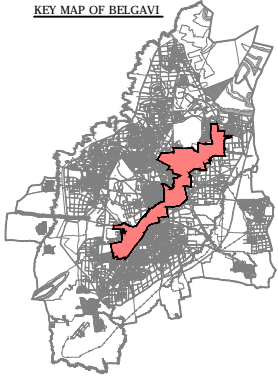
- LEGEND:**
- BUDA BOUNDARY
 - CORPORATION BOUNDARY
 - AREA DEVELOPMENT BOUNDARY
 - RAILWAY TRACK
 - NH ROAD
 - 30M OUTER RING ROAD
 - 36M ROAD
 - 30M ROAD
 - ROAD
 - HT LINE
 - ROCK AREA
 - WATER BODY
 - CANTONMENT AREA
 - SLUM
 - PUBLIC UTILITY

SCALE - 1:250

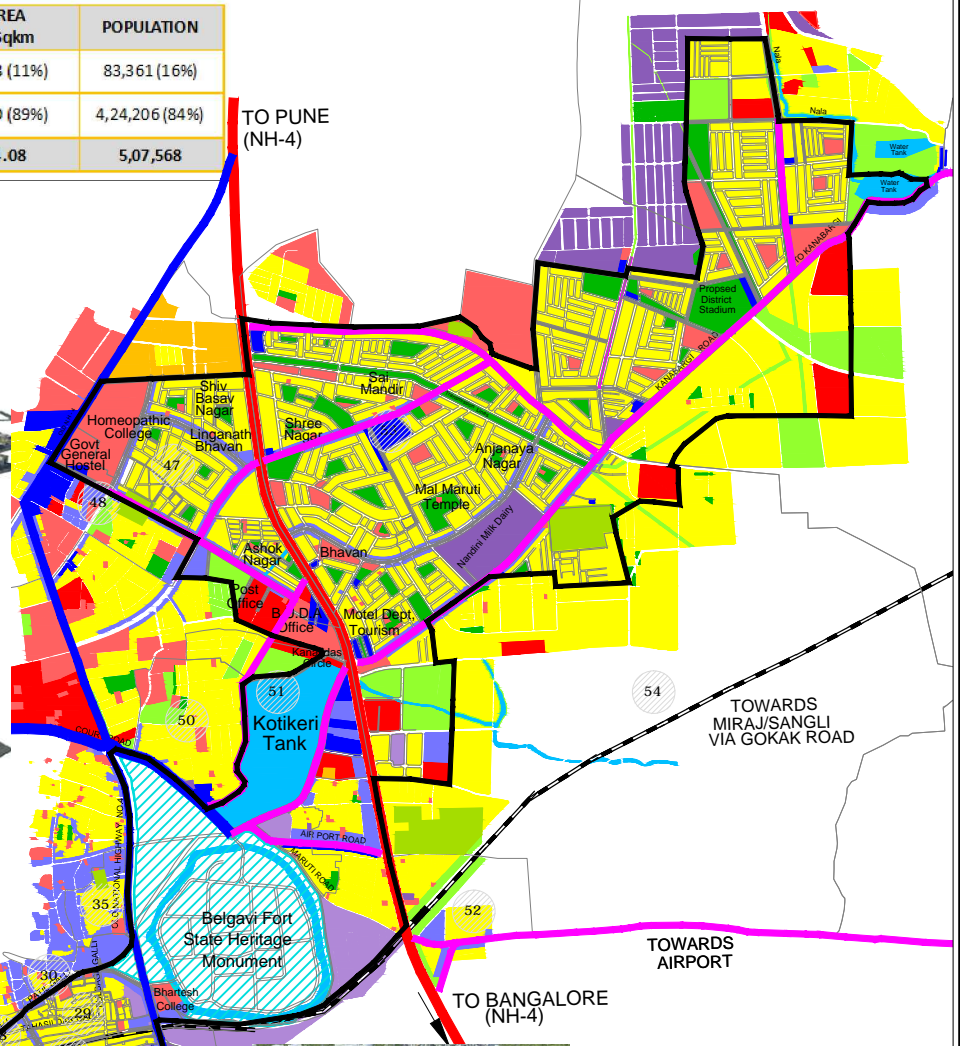
0 250 500 1000 1500 2500 Km

BASE MAP-AREA BASED DEVELOPMENT

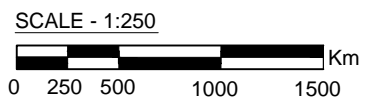
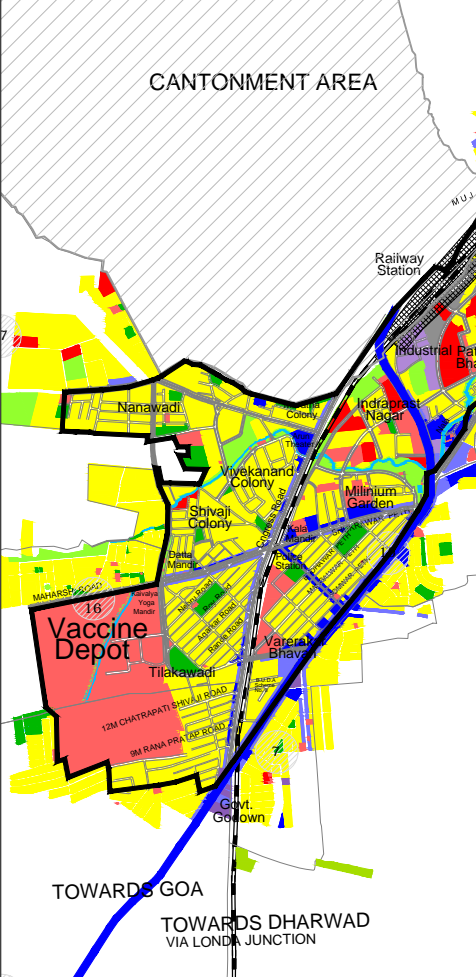
KEY MAP OF BELGAVI



#	AREA In Sqkm	POPULATION
ABD	10.78 (11%)	83,361 (16%)
PAN CITY (exclABD)	83.30 (89%)	4,24,206 (84%)
TOTAL	94.08	5,07,568



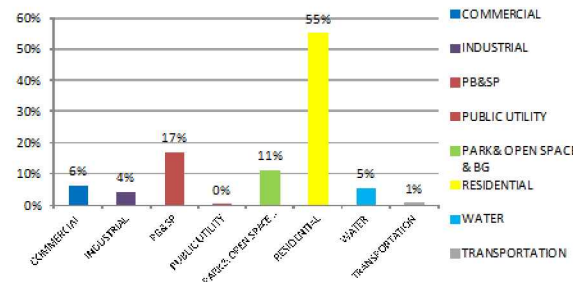
CANTONMENT AREA



LEGEND:

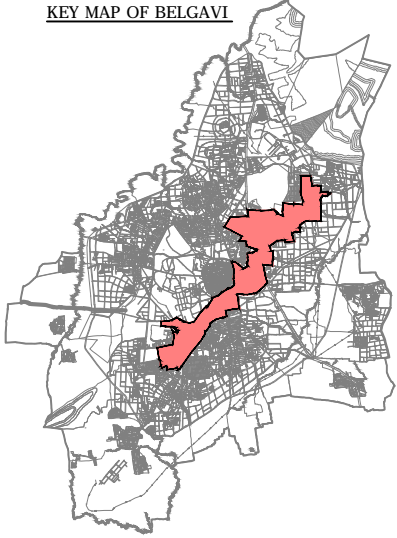
AREA DEVELOPMENT	
BOUNDARY	
RAILWAY TRACK	
NH4	
36M ROAD	
30M ROAD	
ROAD	
COMMERCIAL	
INDUSTRIAL	
PB&SP	
PBUTILITY	
PO&BG	
RESIDENTIAL	
WATER BODY	

ABD - LAND USE DISTRIBUTION PERCENTAGE



AREA BASED DEVELOPMENT PROPOSALS

KEY MAP OF BELGAVI



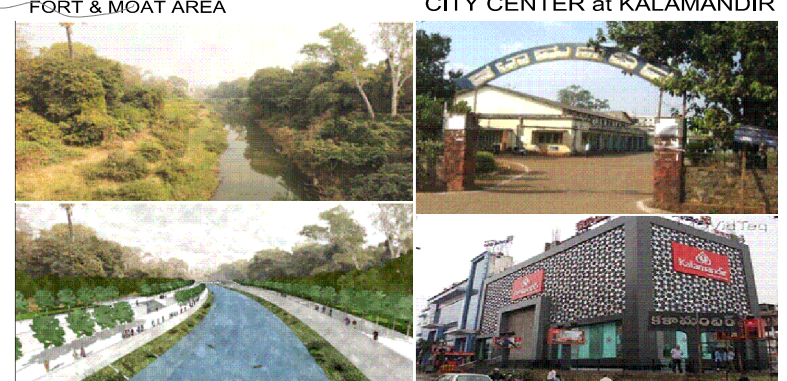
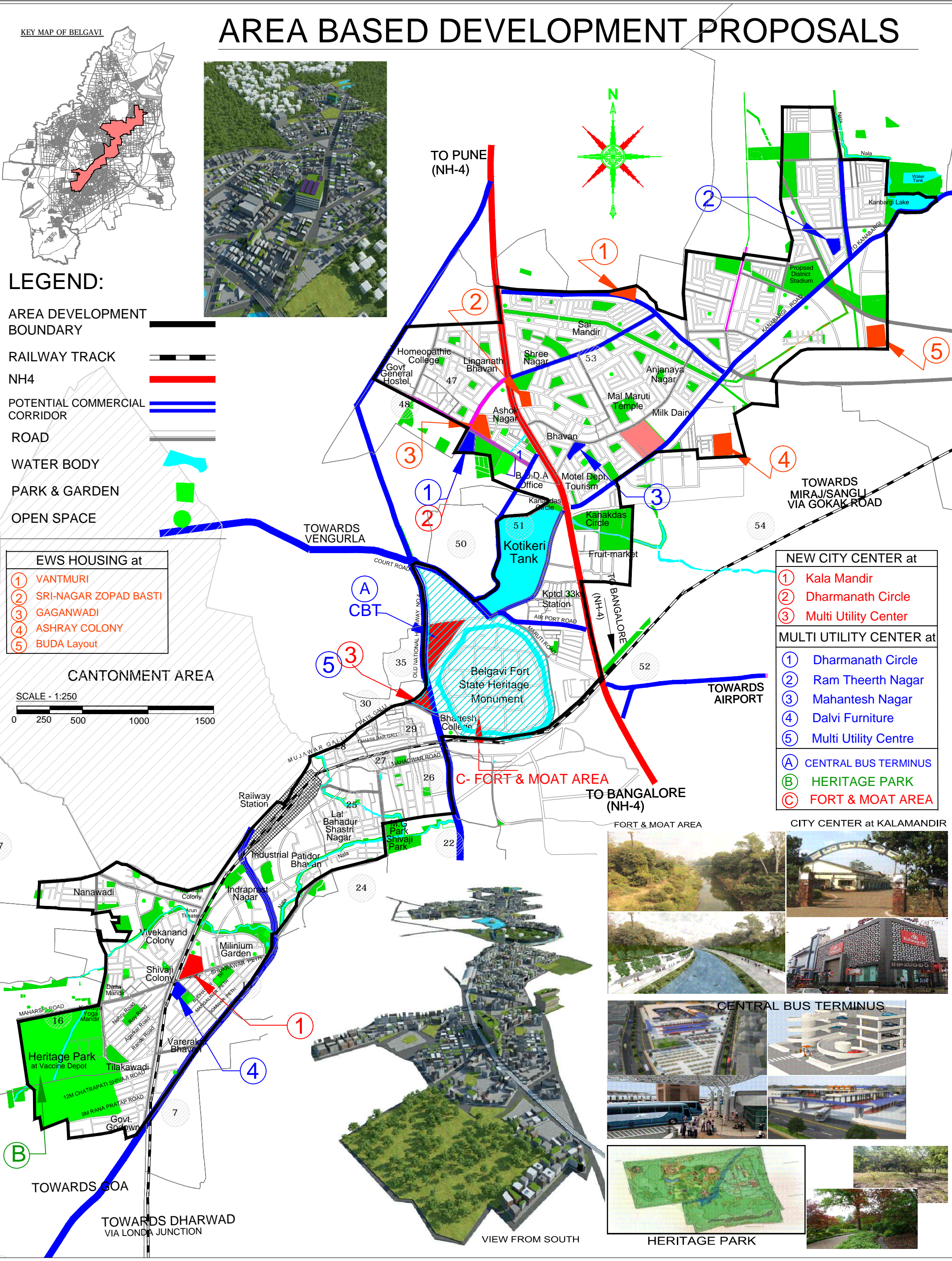
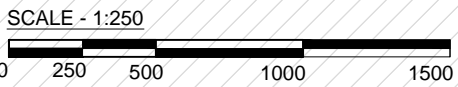
LEGEND:

- AREA DEVELOPMENT BOUNDARY
- RAILWAY TRACK
- NH4
- POTENTIAL COMMERCIAL CORRIDOR
- ROAD
- WATER BODY
- PARK & GARDEN
- OPEN SPACE

- EWS HOUSING at
- ① VANTMURI
 - ② SRI-NAGAR ZOPAD BASTI
 - ③ GAGANWADI
 - ④ ASHRAY COLONY
 - ⑤ BUDA Layout

- NEW CITY CENTER at
- ① Kala Mandir
 - ② Dharmanath Circle
 - ③ Multi Utility Center
- MULTI UTILITY CENTER at
- ① Dharmanath Circle
 - ② Ram Theerth Nagar
 - ③ Mahantesh Nagar
 - ④ Dalvi Furniture
 - ⑤ Multi Utility Centre
- CENTRAL BUS TERMINUS
- (A) CENTRAL BUS TERMINUS
 - (B) HERITAGE PARK
 - (C) FORT & MOAT AREA

CANTONMENT AREA

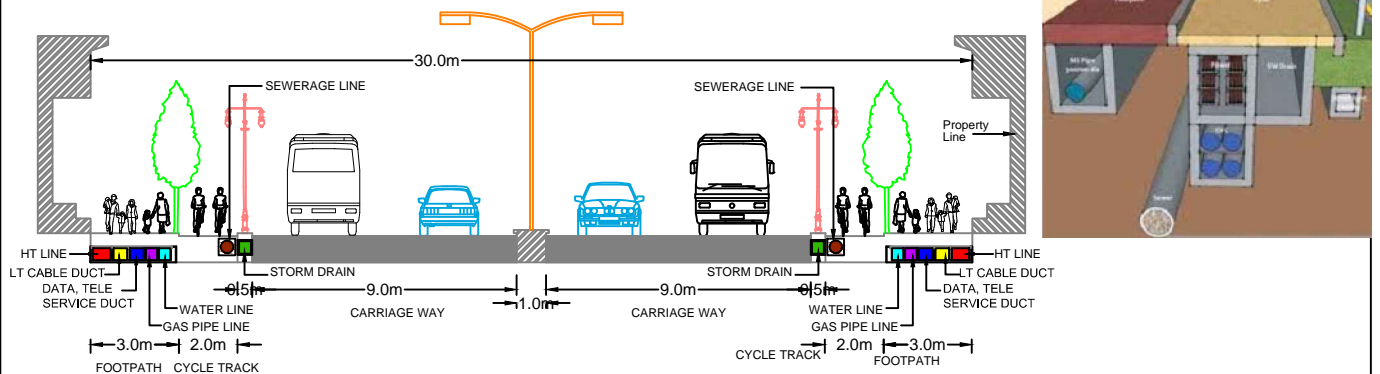


VIEW FROM SOUTH

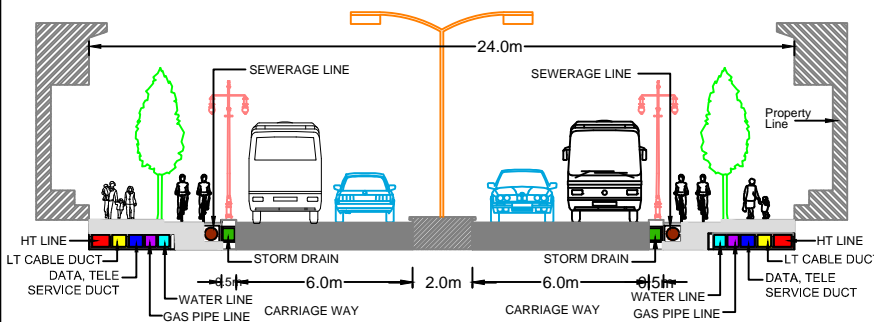
COMPREHENSIVE INFRASTRUCTURE DEVELOPMENT

TYPICAL ROAD CROSS SECTION

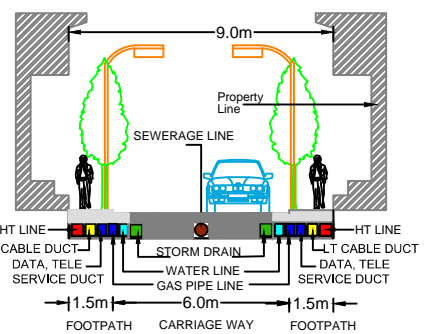
30M ROAD CROSS SECTION



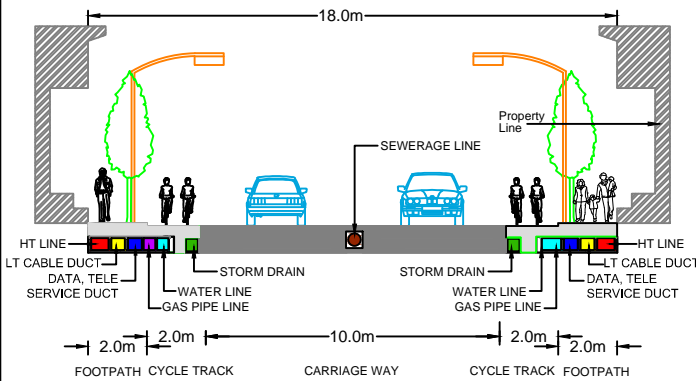
24M ROAD CROSS SECTION



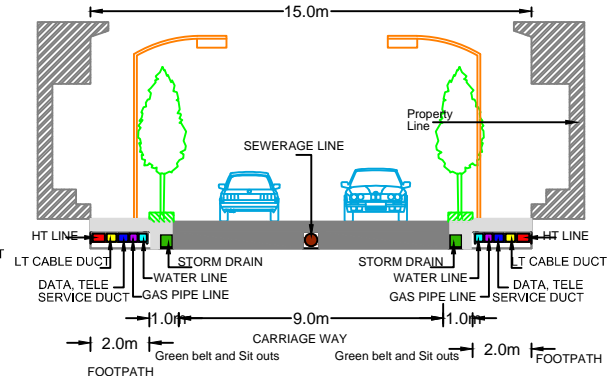
9M ROAD CROSS SECTION



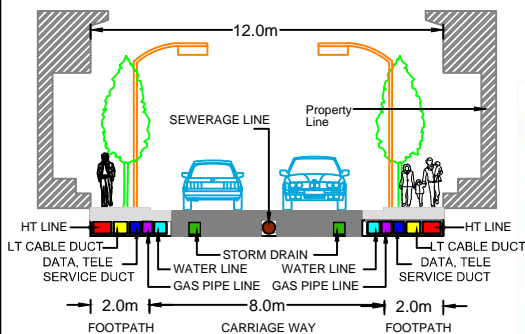
18M ROAD CROSS SECTION



15M ROAD CROSS SECTION



12M ROAD CROSS SECTION



KEY FEATURES

- Carriageway improvement
- Footpaths
- Street Light
- Street Furniture
- Avenue Plantation
- Lanes & Other Traffic Markings
- Surface dressing/Pavement
- Underground Utilities –
Water, telecom, Drainage, Power
- OFC
- Non Motorized Transport: Cycle track
- Facilities for physically challenged

ROAD WIDTH		ROAD LENGTH
Mtr.	Feet	Km
9.0	30	137.28
12.0	40	29.85
13.0	45	1
15.0	50	1
18.0	60	9.1
24.0	80	13
30.0	100	10
36.0	120	5.3
Total (Km)		210.23

Key Features of Area Based Proposal- 1

ABD-Improving facilities and services through Multi-Utilities Complexes (MUCs)

Belagavi One Center

- Public utility offices- like
 - Belagavi One / Citizen Service Centre
 - Local municipal ward offices
 - Post office, Various Bill payment & Receipt counters etc
 - Skill Development Centre and Incubation Centre (NSIC)
- Transport Facilities - Bus terminal (5-8 Transit Buses platforms)
 - Auto rickshaw stand /Taxi Stand (10 Veh.)
 - Modern Cycle Stations (25-30 Bicycles)
- Informal sector/ public hawkers' spaces/zones
- Public conveniences facilities: Community toilets & Fresh drinking water kiosks)
 - Open plazas with sit-out benches, Fountains, Landscaping/ Greenery & Wi-fi Zones
 - Convenient shopping and Local shops including ATMs etc
 - Commercial cum Office complex, Restaurants, Banquet Halls, Small lodges etc.

#	LOCATION	Land in Possession of	EXTENT (ACRES)
1	DHARMANATH CIRCLE	Corporation	13
2	RAM TEERTH NAGAR	BUDA	2.7
3	MAHANTESH NAGAR	Corporation	1.36
4	1 st Gate Opp Kalamandir	Corporation	1.15
5	Fort Road	Cantonment	3.44

KEY FEATURES

- Located on vacant sites of Mpl. Corp./BUDA/Cantt.
- 6 Sites identified -abutting to Major roads / Junctions
- Management & Maintenance under Professional agencies with smart O&M techniques
- Rainwater Harvesting
- Air and noise pollution monitoring systems
- SMART SOLUTIONS
 - Intelligent Parking Mngt. system
 - Smart card
 - PIS
 - Bicycles sharing system



ABD- Improvement of Central Bus Terminus (CBT)

- MODERN BUS STATION :
 - Terminal building (G+1)
 - Dormitory
 - Local Convenience shop
 - Waiting cum seating lobby space
 - Public Toilets
 - Accessible to differently challenged people
- COMMERCIAL cum OFFICE COMPLEX
- MULTI LEVEL CAR PARKING (G+2)
- ROOF TOP SOLAR PANALLING
- RAIN HARVESTING
- AIR AND NOISE POLLUTION MONITORING SYSTEM

Smart Bus Station – in line with KSRTC, Mysore

- LED Boards
- LCD Displays / Video Walls
- Vehicle Location (Real time)
- Control Station
- Enterprise Management System / MIS

Smart Buses

- Passenger Information Systems (Real Time)
- Vehicle Mounted System – GIS/GPS
- In Vehicle Display
- Automated Voice Announcement System
- Smart ticketing (RFID)



KEY FEATURES

- **Site Extent 26 Acres**
- Self sustainable Terminal facilities along with SMART solutions
- Intelligent Parking Mngt. system
- Smart card
- PIS
- Smart Ticketing
- LED Boards
- LCD Displays / Video Walls
- Vehicle Location (Real time)
- Control Station
- Enterprise Management System / MIS

Key Features of Area Based Proposal- 2

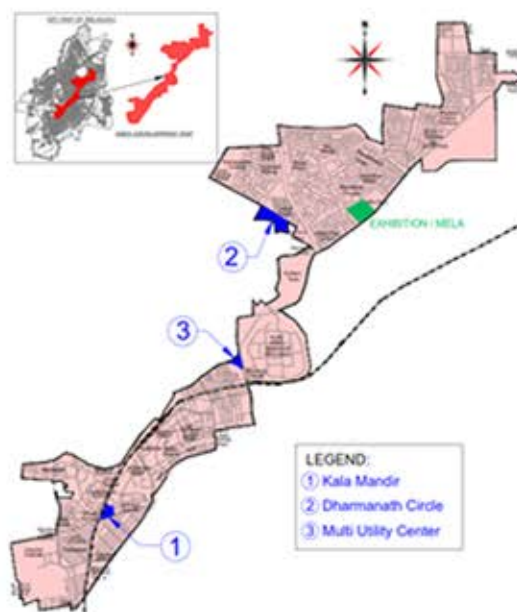
ABD- New City Center

#	LOCATION	Land in Possession of	EXTENT (ACRES)
1	KALA MANDIR	Corporation	2.1
2	DHARMANATH CIRCLE	Corporation	13
3	OLD PB ROAD	Cantonment	3.44

DHRAMNATH CIRCLE : Central level Community Facility Area Extent: 13 acres

ACTIVITIES PROPOSED

- Shopping Mall cum Multiplex Block, Shopping for Informal sector, Local shops, Family entertainment and Restaurants, Food court
- Offices/IT Complex and Incubation centre
- Skill Development Centre
- Multi Utilities Centre
- Parking: 100 cars, 200 2-wheelers
- Bus Terminal
- 25-30 bicycles
- 3 wheeler parking- 25 vehicles



KALAMANDIR : Sector level Community Facility Area Extent: 2.1 acres

ACTIVITIES IN THE PREMISES

- Multi Level Car Parking Lot (G-2)
- Multimodal Parking stand (Auto & Cycle)
- Shopping mall including Multiplex
- Atrium
- Branded Shops
- Local shops
- Family entertainment and Restaurants, Food court etc
- Mini Auditorium cum Culture center
- Other Community Facilities

BENEFITS INCLUDE

- Convenience to citizens (most citizen services available at one place)
- Enhanced Community facilities will increase the livability of citizens
- The New Civic center will enhance the revenues of the corporation.
- Ease of Parking problems in & around Shukrawarpet and Tilakwadi Railway Gate – I and adjoining inner city area
- Optimal use of land value (the site is located in the heart of the city)
- Upfront / Recurring cash inflow, to the Corporation during the concession period (In PPP Mode)
- Transfer of asset to the corporation at the end of the concession period

Before



After



Key Features of Area Based Proposal- 3

ABD-Improvement of Neighborhood Parks & Recreational Spaces

PUBLIC CONVENIENCES FACILITIES:

- Community toilets
- Fresh drinking water kiosks
- Children play area : Swing , Slides , hanging bar etc
- Jogging Tracks
- Open plazas with sit-outs benches for senior citizens, Fountains, Landscaping/ Greenery & Wi-fi Zones
- Establishment of nursery
- Water body, Ponds, Aquatic Plants, Walking tracks along water body
- Parking plazas
- Cycle stations
- Conservation and improvement of foreshores

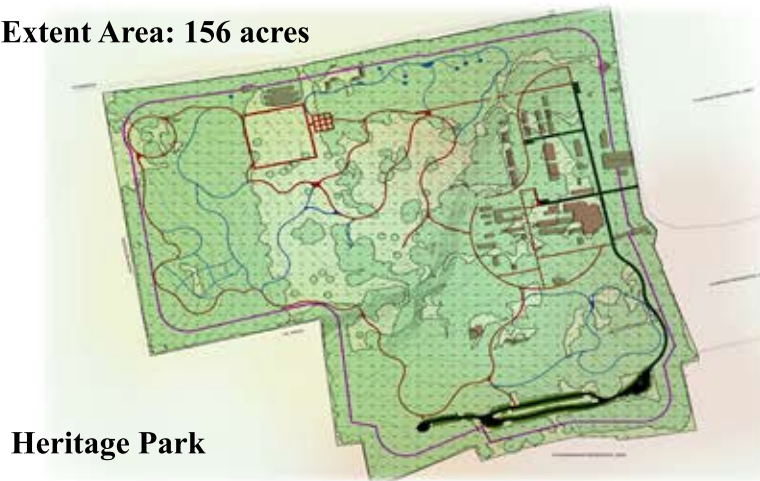


#.	Location	Land in Possession of	Extent (acres)
1	MAHANTESH NAGAR 1	Corporation	0.68
2	MAHANTESH NAGAR 2	Corporation	0.68
3	SHREE NAGAR GARDEN	Corporation	1.98
4	RANICHENNAMMA GARDEN M.M EXTENSION	Corporation	0.89
5	KARANJIMATH UDYAN	Corporation	1.76
6	SHIVALAYA UDYAN, SHIVABASAV NAGAR	Corporation	1.01
7	GARDEN AT MM NAGAR EXTENSION SECTOR-12	Corporation	3.47
8	PRAGATHI GARDEN	Corporation	0.88
9	MALA MARUTI OPP. POLICE STATION	Corporation	1.24
10	BHAGAVAN MAHAVEER UDYAN	Corporation	0.87
11	BASAVESWAR UDYAN	Corporation	2.96
12	NURSURY UDYAN, GOAVES	Corporation	0.76
13	MAHATMA PULE UDYAN, TILAKWADI	Corporation	0.13
14	VACCINE DEPOT UDYAN, TILAKAWADI	Corporation	1.03
15	BR. NATH PAI UDYAN	Corporation	1.32
16	MARATHA COLONY UDYAN	Corporation	0.15
17	CONGRESS WELL PARK	Corporation	0.97
18	KARIAPPA COLONY GARDEN	Corporation	0.61

Vaccine Depot as Heritage Park- Activities

#	PROPOSALS
1	Gramin Bharat
2	Existing water bodies development, boating
3	Glass house
4	Tree houses
5	Social – Club
6	Water ponds
7	Old buildings Heritage
8	Amusement park
9	Picnic huts
10	Jogging tracks
11	Children park
12	Amphitheatre
13	Herbal garden
14	Botanical garden
15	Open Yoga centre
16	Thick blocks afforestation

Extent Area: 156 acres



Heritage Park



ABD- Conservation & Preservation of Central Area

KEY FEATURES

- Cleaning of MOAT to make it pollution-free
- Retain and replenish the water
- Creating a safe habitat environment
- Development of Public and recreational spaces
- Strengthen the MOAT/ Canal edge
- Improve accessibility and connectivity in the area
- Generate resources to pay for all of the foregoing
- Integrate with city development
- Increase groundwater recharge

ACTIVITIES in MOAT PREMISES : REJUVENATION OF MOAT AREA AS A WATER BODY AND LANDSCAPED AREA

- Removing the algae and weed
- Dredging the moat to have proper depth
- Aerators & Connecting with Kotekere
- Development of Natural aquarium
- Foot over bridges
- Recycling of Water (Aeration) in MOAT
- Canoeing & fountains in MOAT

Before



After



THEME BASED PARKS AND GARDEN

- Walkway- Jogging Tracks
- Public recreational space
- Open sit out area , Furniture
- Sound & light show-Laser Show
- Open air theatre

Improving the Lake and MOAT Hydraulics

MOAT PREMISES INCLUDES

- Vegetable market Premises
- Open Parking Lot
- MOAT AREA
- Open Land Under Income tax Dept



ICT Components

- GIS and GPS enablement (in stage I 54km of roads with 17km of ring road, zone control in stage II)
- CCTV monitoring (currently only 19 cameras are enabled), need to augment to 12 + 38 + 88 in Stage I and another 54 + 17 + 70 in Stage II
- Integrated monitoring through a central monitoring team
- Parking is monitored through tickets and location CCTV

1 Balanced economy

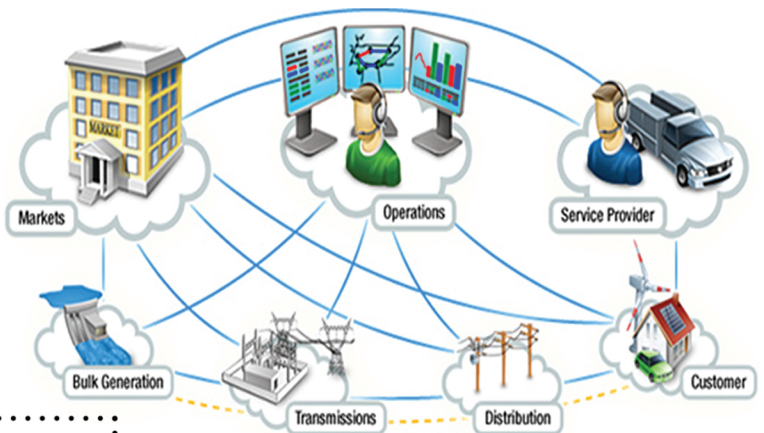
- Suitable for:
 - Industries with existing infrastructure – with more than 50% of city population as work force
 - Educational institutes with more than 97% population enrolled in primary education
 - Cooperative Agriculture and Animal husbandry
 - Healthcare with a ratio of 1:2500 doctors to citizens
 - Transport hub through distributed connectivity (rail – 36 km, roads – 634km)

2 E-Governance

- ULB and Government sector e-enabled
- Provides platform to provide citizen services over internet through web and mobile channels
- Information accessible through official websites

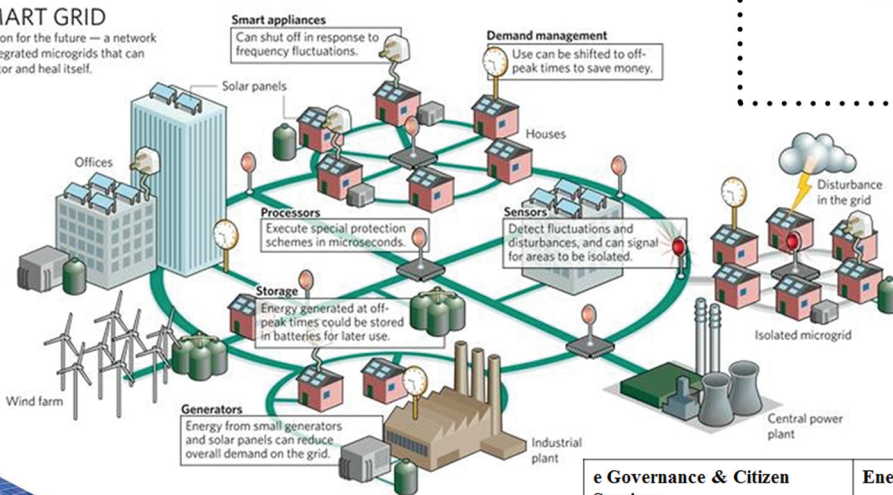
3 Utilities

- Electricity and Water
 - Coverage of 97% for Electricity – Enables metering and optimization
 - Water distribution through tanks, wells and other features – GIS enabled



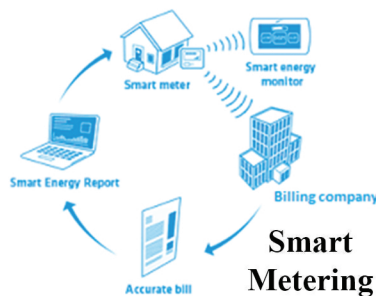
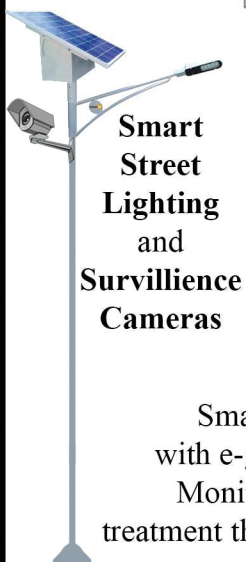
SMART GRID

A vision for the future — a network of integrated microgrids that can monitor and heal itself.



Command Center

- Enable service delivery and monitoring through command center
- Real time dashboard that would be developed using responsive UI design



Smart meters integrated with e-governance services
Monitoring of discharge, treatment through smart meters



e Governance & Citizen Services	Energy Management	Water Management
<ol style="list-style-type: none"> 1. Mobile App for Public Services 2. Electronic building approvals 3. Wifi Hot Spots 4. Smart Street Vendor App & Cards 5. Intelligent building solutions 	<ol style="list-style-type: none"> 1. Roof Top PVs Solar light 2. Smart Meters & Sensors 3. Energy Efficient & Green Buildings 4. Energy efficient street lighting with sensors 5. Usage of energy saving pumps 6. ESCO model of implementation 	<ol style="list-style-type: none"> 1. Storm Water Management by Sensors 2. Flood management and alert system for evacuation 3. Managing Pumping requirements with sensors 4. Smart Meters 5. Leakage detection 6. Water Quality monitoring
Urban Mobility	Waste Management	Other Facilities
<ol style="list-style-type: none"> 1. Intelligent Traffic Management System 2. Smart Parkings 3. Integrated Multi Model Transport System 4. Tolling and congestion charging 5. Seamless connectivity 	<ol style="list-style-type: none"> 1. Waste to energy & fuel 2. Waste to compost 3. Waste water treatment 4. RRR of Waste 	<ol style="list-style-type: none"> 1. Telemedicine & Tele Education 2. Trade Facilitation Centres 3. Skill Development Centres

3.9 CITIZEN INTERACTIONS

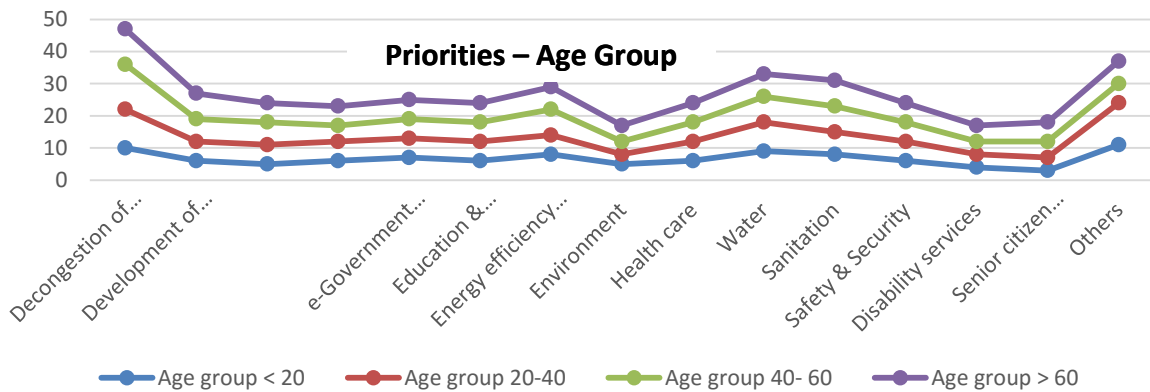
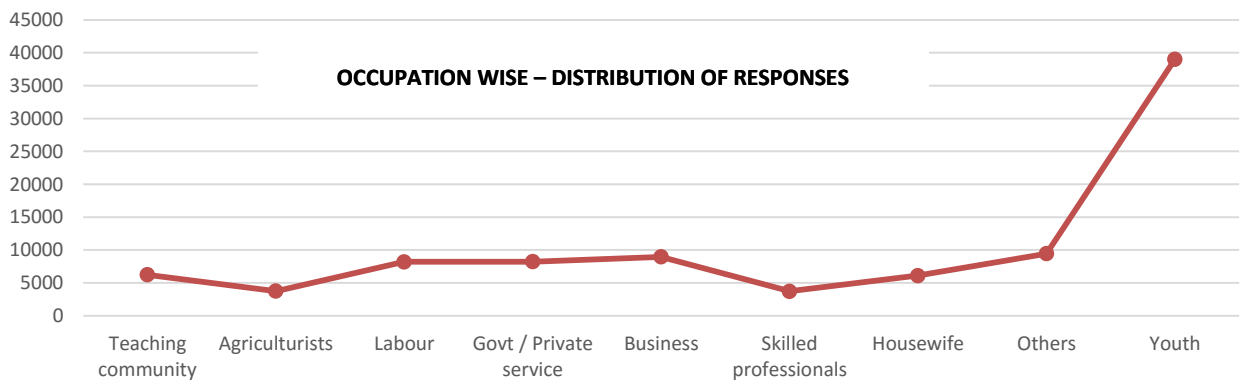
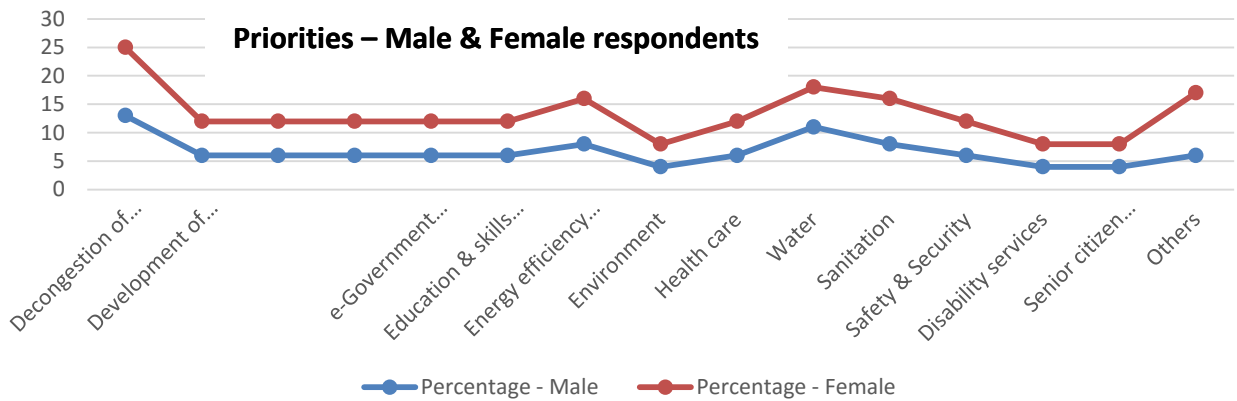
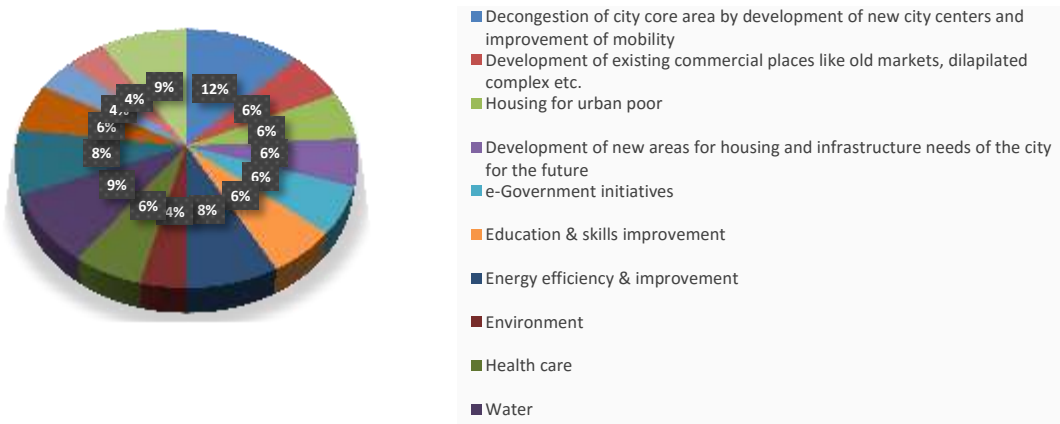


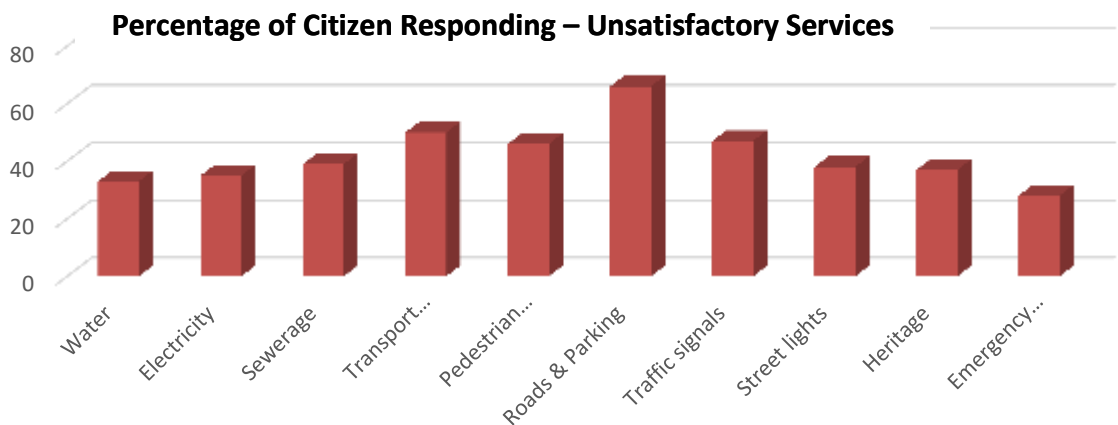
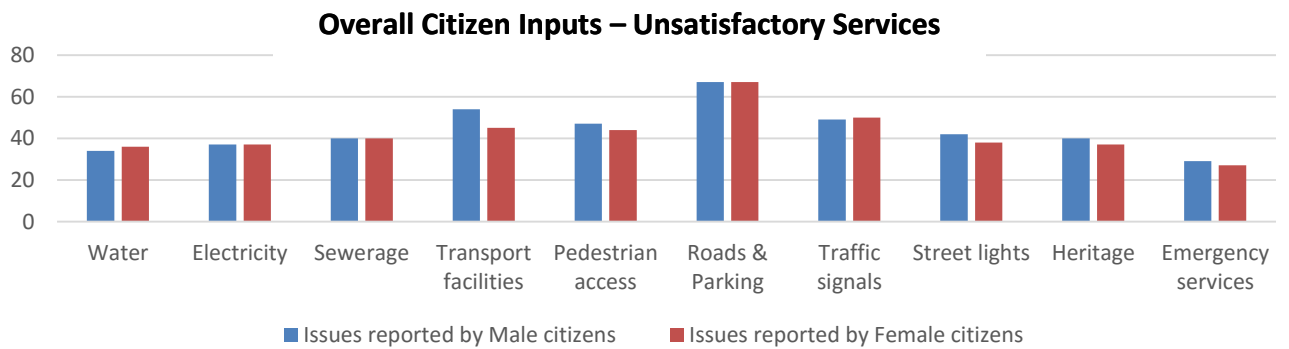
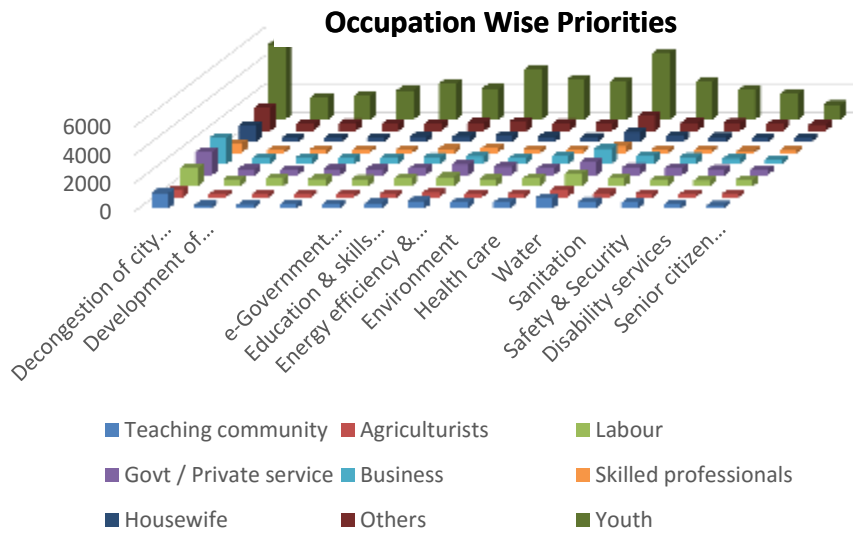
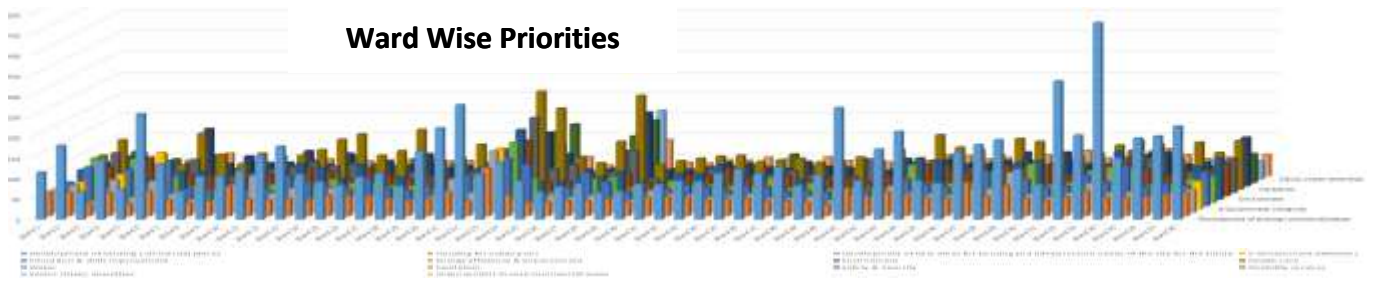
3.10 ADVERTISEMENT IN BANNER AND HOARDINGS

3.11 ADVERTISEMENT IN MEDIA

3.12 CITIZEN ENGAGEMENT RESPONSES

OVERALL PRIORITIES AS LISTED BY CITIZENS

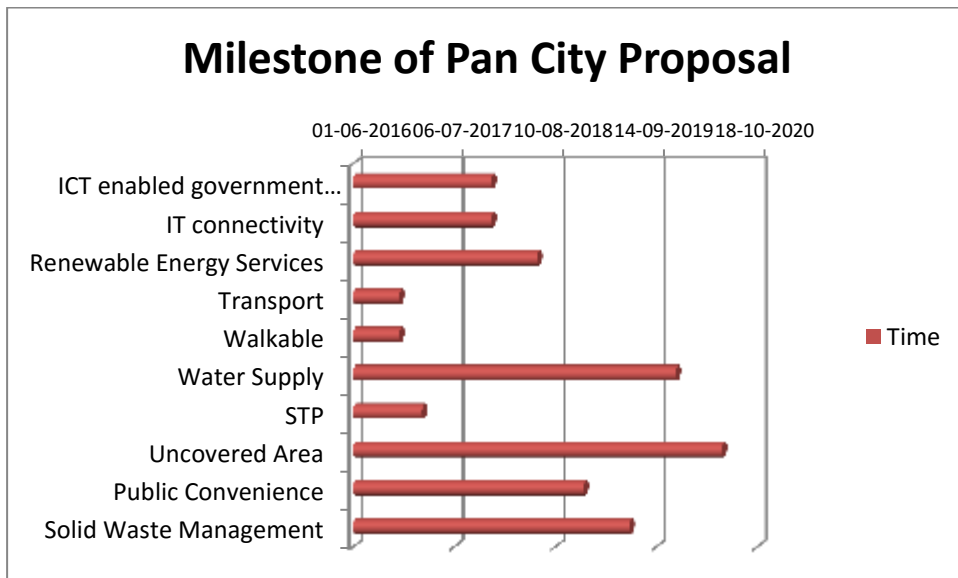




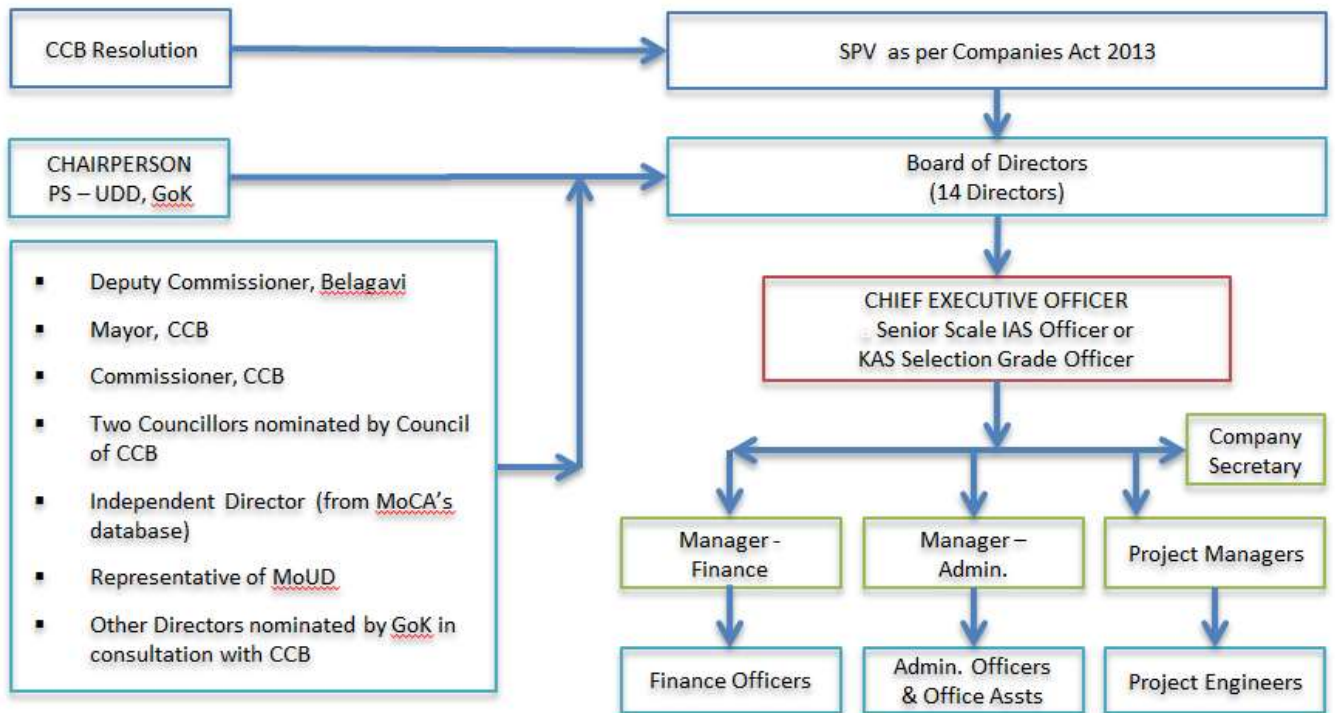
3.13 CITIZEN SURVEY QUESTIONNAIRE

Belagavi Smart City Citizen Response Sheet					
Name :		Place of residence:			
How long have you been staying in Belagavi (No. of years) :		Age	Gender :		
Occupation :		Mobile #			
Ward # :		Email Id			
Please rate overall city facilities (<input type="checkbox"/>)					
A. Overall City water supply		Most satisfied	Satisfied	Improvements Required	
B. Overall Electricity supply		Most satisfied	Satisfied	Improvements Required	
C. Overall Sewerage and waste management - Is door to door collection happening?		Most satisfied	Satisfied	Improvements Required	
D. Transport facilities		Most satisfied	Satisfied	Improvements Required	
E. Amenities for pedestrians and footpaths, Encroachment-free public areas		Most satisfied	Satisfied	Improvements Required	
F. Quality of roads and parking facilities		Most satisfied	Satisfied	Improvements Required	
G. Traffic signals and traffic sense		Most satisfied	Satisfied	Improvements Required	
H. Street lights and signages		Most satisfied	Satisfied	Improvements Required	
I. Heritage Preservation, Tourism facilities		Most satisfied	Satisfied	Improvements Required	
J. Police, fire and ambulance services		Most satisfied	Satisfied	Improvements Required	
In your opinion choose what all factors need to be included in Smart city vision. Select all that are relevant in priority order					
Table-01					
Sl. No.	Sector	Sl. No.	Sector	Sl. No.	Enter Sl. No. of the Sector from the Table-01 as per your priority
1	Improvement in core commercial areas of the city	8	Environment	1	
2	Development of existing commercial places like old markets, dilapidated complex etc.	9	Health care	2	
3	Housing for urban poor	10	Water	3	
4	Development of new areas for housing and infrastructure needs of the city for the future	11	Sanitation	4	
5	e-Government Initiatives	12	Safety & Security	5	
6	Education & skills improvement	13	Disability services	6	
7	Energy efficiency & Improvement	14	Senior citizen amenities	7	
Give your smart solutions for future Belagavi Smart City :				8	
				9	
				10	
				11	
				12	
				13	
				14	

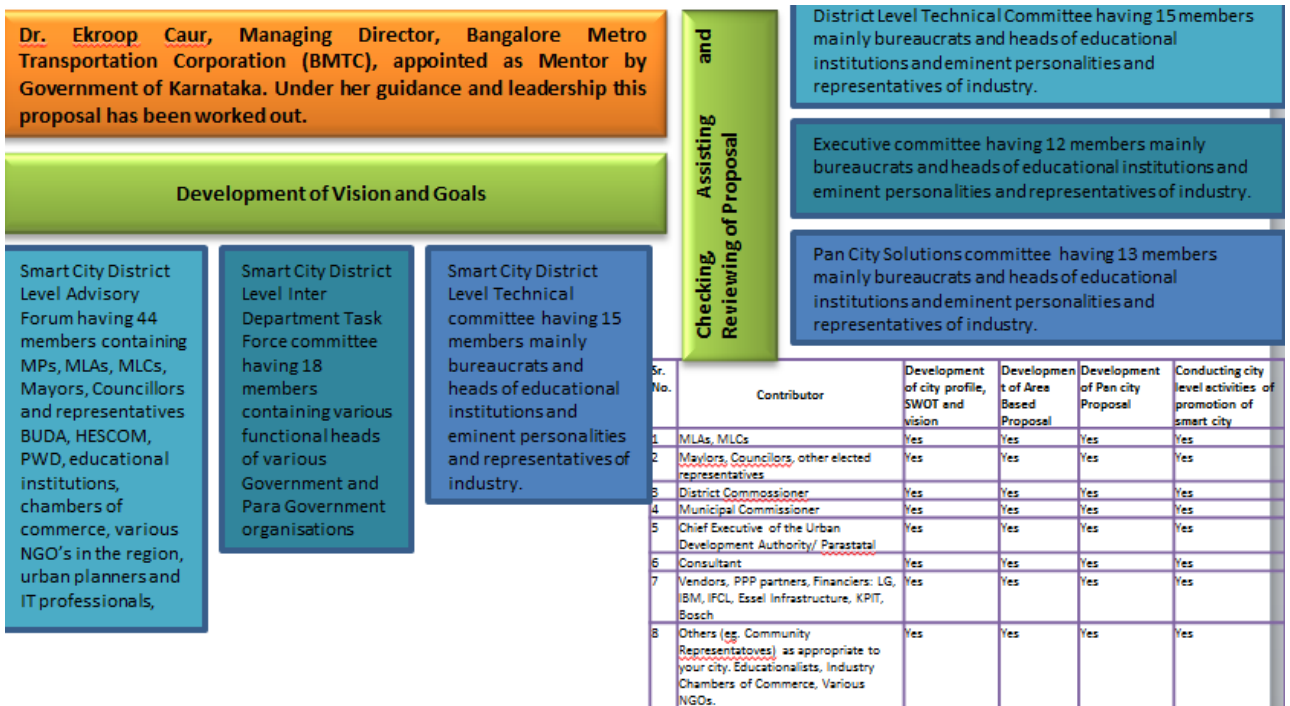
3.14 Milestone showing timelines of Area Based Development and Pan City Proposal



3.15 SPV Structure



3.16 Organogram at shows the relation between all those who helped you create this proposal and the role they will play in the future



3.17 Financial Plan

Description	Cost (Rs.Cr.)	SFC	14th Finance	State Special Grant	ULB	Schemes	Scheme Details	Smart City	Departments	Dept.s Details	PPP
AREA BASED DEVELOPMENT											
INNOVATIVE USE OF VACANT SPACES											
Taking governance to the neighbourhoods (Multi-Utilities Facilitation Centers - Green buildings embedded with Belagavi-One)											
Dharamnath Circle	46.00	-	-	-	-	-	-	-	-	-	46.00
Ramteerth Nagar	38.00	-	-	-	-	-	-	-	-	-	38.00
Mahantesh Nagar	29.00	-	-	-	-	-	-	-	-	-	29.00
First Rly Gate Opp. Kalamandir	43.00	-	-	-	-	-	-	-	-	-	43.00
Fort Road	11.40	-	-	-	-	-	-	-	-	-	11.40
Total	167.40	-	-	-	-	-	-	-	-	-	167.40
Developing Theme based and heritage Parks & Recreational Spaces											
Development of a Heritage Park	26.00	-	-	-	-	-	-	26.00	-	-	-
Theme-based development/Improvement of Neighborhood Parks & Recreational Spaces	15.00	-	-	-	-	3.00	AMRUT	8.00	4.00	BUDA (Shivcharitra)	-
Urban afforestation through block plantations	5.00	-	-	-	1.00	-	-	3.00	1.00	Forest	-
Avenue Plantation	2.00	-	-	-	1.00	-	-	1.00	-	-	-
Art Gallery Cum Exhibition Center and Children Science Park	14.00	-	-	-	-	-	-	14.00	-	-	-
Rehabilitation of Cattle and Pigs	1.00	-	-	-	-	-	-	1.00	-	-	-
Parking for Private buses, Mini LCV on Hires charges	2.00	-	-	-	-	-	-	2.00	-	-	-
Rain Water Harvesting and composting facilities in parks and gardens	1.00	-	-	-	-	-	-	1.00	-	-	-
Total	66.00	-	-	-	2.00	3.00	-	56.00	5.00	-	-
GRAND TOTAL	233.40	-	-	-	-	-	-	-	-	-	-
Upgrading of Heritage Precincts											
Development of Fort and Moat Precincts	25.00	-	-	-	-	-	-	25.00	-	-	-
Improvement of Lakes	10.00	-	-	-	-	-	-	10.00	-	-	-
Total	35.00	-	-	-	-	-	-	35.00	-	-	-
24 x 7 Water supply, Smart Metering											
Water Metering	9.00	-	-	-	-	-	-	9.00	-	-	-
Total	9.00	-	-	-	-	-	-	9.00	-	-	-
Enviornment , Energy Efficiency , Renewable Energy											
Smart Electricity Metering	8.50	-	-	-	-	-	-	8.50	-	-	-
Energy Efficiency Program for Street lighting	5.00	-	-	-	-	-	-	-	-	-	5.00
UG - LT Cabling	168.00	-	-	-	-	-	-	168.00	-	-	-
Air Quality, Water Quality, Recharge of Water Bodies	15.00	-	-	-	-	-	-	10.00	-	-	5.00
TOTAL	196.50	-	-	-	-	-	-	186.50	-	-	10.00
Affordable Housing											
Development of Affordable Housing for EWS	84.00	-	-	-	-	77.00	PMAY & Vajapeyi Housing	7.00	-	-	-
EWS Housing in Approved BUDA Layout	43.52	-	-	-	-	30.00	PMAY & Vajapeyi Housing	18.96	-	-	-
Total	127.52	-	-	-	-	107.00	-	25.96	-	-	-
Skill Development Center											
Skill Development Center	8.00	-	-	-	-	-	-	8.00	-	-	-
Total	8.00	-	-	-	-	-	-	8.00	-	-	-
UG Ducting											
Multi-utility UG Ducting	62.00	-	-	-	-	-	-	62.00	-	-	-
Total	62.00	-	-	-	-	-	-	62.00	-	-	-
Non Motorized Transport,Walkability, Network Connectivity,MLCP, Para Transit											
Pedestrian friendly Pathways	45.00	8.75	1.90	-	-	-	-	34.35	-	-	-
Cycle Tracks	17.00	-	-	-	-	-	-	17.00	-	-	-
Carriageway Improvement	125.50	10.00	-	60.00	-	-	-	55.50	-	-	-
Total	187.50	18.75	1.90	60.00	-	-	-	106.85	-	-	-
Urban Mobility											
Improvement of Central Bus Terminus & City Bus Terminus	110.00	-	-	-	-	-	-	30.00	30.00	KSRTC	50.00
Flyover	129.00	-	-	-	-	-	-	-	129.00	PWD	-
Underpass	56.00	-	-	-	-	-	-	-	56.00	PWD	-
ROB	101.00	-	-	-	-	-	-	-	101.00	PWD	-
Improvement of Road Junction Ambience	4.00	-	-	-	-	-	-	2.00	-	-	2.00
Total	400.00	-	-	-	-	-	-	32.00	316.00	-	52.00
Development of City Centers on Green Building concept											
Development of modern market at Tilakwadi (Kalamandir)	53.00	-	-	-	-	-	-	16.00	-	-	37.00
Development of modern market at Dharamnath Circle	89.00	-	-	-	-	-	-	27.00	-	-	62.00
Swimming Pool and Badminton Court	3.75	-	-	-	3.75	-	-	-	-	-	-
Total	145.75	-	-	-	3.75	-	-	43.00	-	-	99.00
Sewerage System											
Construction of STP , Uncovered UGD, Improvement/Rehabilitation of sewerage lines	156.00	-	-	-	-	156.00	AMRUT	-	-	-	-
Total	156.00	-	-	-	-	156.00	-	-	-	-	-

3.17 Financial Plan

Description	Cost (Rs.Cr.)	SFC	14th Finance	State Special Grant	ULB	Schemes	Scheme Details	Smart City	Departments	Dept.s Details	PPP
Public Convenience & Amenities											
Public Urinals & Toilets	1.50	1.50	-	-	-	-	-	-	-	-	-
Road Side Drinking Water Kiosks	9.00	-	-	-	-	-	-	9.00	-	-	-
Bus Shelters	0.50	-	-	-	-	-	-	-	-	-	0.50
Tourist Guidance Centers	3.00	-	-	-	-	-	-	3.00	-	-	-
Trauma Center (Dharamnath Circle)	3.00	-	-	-	-	-	-	3.00	-	-	-
Total	17.00	1.50	-	-	-	-	-	15.00	-	-	0.50
Solid Waste Management											
Solid Waste Management including RDF Plant	8.00	-	-	-	-	4.50	Swach Bharat Abhiyan	1.50	-	-	2.00
Total	8.00	-	-	-	-	4.50	-	1.50	-	-	2.00
Storm Water Drain & Recharge of Water Bodies											
Primary & Secondary Drains	70.00	7.50	1.80	5.00	-	-	-	55.70	-	-	-
Total	70.00	7.50	1.80	5.00	-	-	-	55.70	-	-	-
Health											
Upgradation of Primary Health Centers	5.00	-	-	-	-	-	-	5.00	-	-	-
Total	5.00	-	-	-	-	-	-	5.00	-	-	-
TOTAL - AREA BASED DEVELOPMENT	1,660.67	27.75	3.70	65.00	5.75	270.50	-	641.51	321.00	-	330.90
PAN CITY PROPOSALS											
EGOVERNANCE & IT ENABLEMENT											
Central Command Center Surveillance (GPRS Enabled CMOS Cameras) & Traffic Sensors (WVDs)	12.00	-	-	-	-	-	-	12.00	-	-	-
Surveillance (GPRS Enabled CMOS Cameras) for Safety security of Women , Childre and senior citizens & Traffic Sensors (WVDs)											
E-Governance (Applications, 3P Services)	12.00	-	-	-	-	-	-	12.00	-	-	-
Smart Metering for Electricity	51.50	-	-	-	-	-	-	51.50	-	-	-
Smart Metering Water Supply	53.00	-	-	-	-	-	-	53.00	-	-	-
IT Connectivity (Interconnectivity, Kiosks, Wifi & GPRS Subscription)	45.00	-	-	-	-	-	-	-	10.00	BSNL	35.00
TOTAL	173.50	-	-	-	-	-	-	128.50	10.00	-	35.00
Enviornment, Energy Efficiency & Renewable Energy											
Solar Rooftop Paneling (30MW)	195.00	-	-	-	-	-	-	-	-	-	195.00
Wind Power Generation (30 MW)	186.00	-	-	-	-	-	-	-	-	-	186.00
Energy Efficiency - LED Street Lighting	29.00	-	-	-	-	-	-	-	-	-	29.00
UG - HT Line	316.27	-	-	-	-	-	-	-	316.27	HESCOM	-
TOTAL	726.27	-	-	-	-	-	-	-	316.27	-	410.00
Water Supply & Waste Water Management											
24x7 Water Supply - Phase I	427.00	-	-	93.50	120.00	213.50	World Bank	-	-	World Bank+SG+CCB	-
Integrated SWM	38.00	-	-	-	9.50	28.50	Swach Bharat Abhiyan	-	-	-	-
TOTAL	465.00	-	-	93.50	129.50	242.00	-	-	-	-	-
Traffic, Transport & Monbilty											
Intelligent traffic management system	10.00	-	-	-	-	-	-	10.00	-	-	-
Non Vehicle street / Zones and Hawkers zone	10.00	-	-	-	-	-	-	10.00	-	-	-
Priority Bus Lanes	21.00	-	-	-	-	-	-	21.00	-	-	-
Bus Terminals With Multi-Utility Facilitation Centers	130.00	-	-	-	-	-	-	52.00	-	-	78.00
Smart Bus Shelters	1.00	-	-	0.30	-	-	-	-	-	-	0.70
Paratransit	1.00	-	-	-	-	1.00	FAME India	-	-	-	-
Battery operated Autorickshaws (Retrofitting Kit)	0.80	-	-	-	-	0.75	FAME India	0.05	-	-	-
Retrofitting Midi Buses of NWRKTC	23.40	-	-	-	-	19.50	FAME India	3.90	-	-	-
Pedestrian friendly Pathway	67.00	-	-	-	-	-	-	67.00	-	-	-
Cycle Tracks	68.00	-	-	-	-	-	-	68.00	-	-	-
Improvement of Road Junction Ambience	8.50	-	-	-	-	-	-	7.00	-	-	1.50
TOTAL	340.70	-	-	0.30	-	21.25	-	238.95	-	-	80.20
Natural Gas Distribution											
City Gas Distribution	150.00	-	-	-	-	-	-	-	-	-	150.00
TOTAL	150.00	-	-	-	-	-	-	-	-	-	150.00
Health											
Super-specialty hospital at BIMS	350.00	-	-	-	-	-	-	-	350.00	Health Dept	-
Total	350.00	-	-	-	-	-	-	-	350.00	-	-
TOTAL - PAN CITY SOLUTIONS	2,205.47	-	-	93.80	129.50	263.25	-	367.45	676.27	-	675.20
GRAND TOTAL (Rs.Crores)	3,866.14	27.75	3.70	158.80	135.25	533.75	-	1,008.96	997.27	-	1,006.10

3.18 O&M Cost and Life Time

Description	Project Cost (Rs.Cr.)	O&M Cost %	Remark	OPERATION												O&M Costs	Life Time Costs	
				1	2	3	4	5	6	7	8	9	10	11	12			
Improvement/Rehabilitation of sewerage lines	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Public Convenience & Amenities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Public Urinals & Toilets	1.50	2.00%		0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.55	2.05
Road Side Drinking Water Kiosks	9.00	10.00%		1.04	1.09	1.15	1.21	1.27	1.33	1.40	1.47	1.54	1.62	1.70	1.78	1.86	16.58	25.58
Bus Shelters	0.50	0.00%	PPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50
Tourist Guidance Centers	3.00	0.00%	Tourism Dept	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00
Trauma Center (Dharamnath Circle)	3.00	0.00%	Private Maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00
Solid Waste Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Management including RDF Plant	8.00	2.00%		0.19	0.19	0.20	0.21	0.23	0.24	0.25	0.26	0.27	0.29	0.30	0.32	0.34	2.95	10.95
Storm Water Drain & Recharge of Water Bodies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Primary & Secondary Drains	70.00	0.75%		0.61	0.64	0.67	0.70	0.74	0.78	0.81	0.86	0.90	0.94	0.99	1.04	1.09	9.67	79.67
Health	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upgradation of Primary Health Centers	5.00	0.00%	DHO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.00
TOTAL	1,661			23	25	26	27	29	30	31	33	35	36	38	40	374	2,035	
PAN CITY PROPOSALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EGOVERNANCE & IT ENABLEMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central Command Center Surveillance (GPRS Enabled CMOS Cameras) & Traffic Sensors (WVDs)	12.00	5.00%		0.69	0.73	0.77	0.80	0.84	0.89	0.93	0.98	1.03	1.08	1.13	1.19	1.24	11.06	23.06
Surveillance (GPRS Enabled CMOS Cameras) for Safety security of Women , Childre and senior citizens & Traffic Sensors (WVDs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E-Governance (Applications, 3P Services)	12.00	10.00%		1.39	1.46	1.53	1.61	1.69	1.77	1.86	1.95	2.05	2.16	2.26	2.38	2.50	22.11	34.11
Smart Metering for Electricity	51.50	15.00%		8.94	9.39	9.86	10.35	10.87	11.41	11.98	12.58	13.21	13.87	14.57	15.29	16.04	142.34	193.84
Smart Metering Water Supply	53.00	15.00%		9.20	9.66	10.15	10.65	11.19	11.75	12.33	12.95	13.60	14.28	14.99	15.74	16.52	146.49	199.49
IT Connectivity (Interconnectivity, Kiosks, Wifi & GPRS Subscription)	45.00	10.00%		5.21	5.47	5.74	6.03	6.33	6.65	6.98	7.33	7.70	8.08	8.49	8.91	9.35	82.92	127.92
Envionment, Energy Efficiency & Renewable Energy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solar Rooftop Paneling (30MW)	195.00	0.00%	PPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	195.00
Wind Power Generation (30 MW)	186.00	0.00%	PPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	186.00
Energy Efficiency - LED Street Lighting	29.00	0.00%	PPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29.00
UG - HT Line	316.27	0.00%	HESCOM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	316.27
Water Supply & Waste Water Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24x7 Water Supply - Phase I	427.00	0.00%	SPV (water tariff)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	427.00
Integrated SWM	38.00	2.00%		0.88	0.92	0.97	1.02	1.07	1.12	1.18	1.24	1.30	1.36	1.43	1.50	1.57	14.00	52.00
Traffic, Transport & Monbilty	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intelligent traffic management system	10.00	15.00%		1.74	1.82	1.91	2.01	2.11	2.22	2.33	2.44	2.57	2.69	2.83	2.97	3.11	27.64	37.64
Non Vehicle street/ Zones and Hawkers zone	10.00	0.50%		0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.92	10.92
Priority Bus Lanes	21.00	5.00%		1.22	1.28	1.34	1.41	1.48	1.55	1.63	1.71	1.80	1.89	1.98	2.08	2.18	19.35	40.35
Bus Terminals With Multi-Utility Facilitation Centers	130.00	0.00%	PPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130.00
Smart Bus Shelters	1.00	0.00%	PPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00
Paratransit	1.00	10.00%		0.12	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.19	0.20	0.20	1.84	2.84
Battery operated Autorickshaws (Retrofitting Kit)	0.80	0.00%	Private Maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80
Retrofitting Midi Buses of NWKRTC	23.40	0.00%	NWKRTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.40
Pedestrian friendly Pathway	67.00	2.00%		1.55	1.63	1.71	1.80	1.89	1.98	2.08	2.18	2.29	2.41	2.53	2.65	2.78	24.69	91.69
Cycle Tracks	68.00	2.00%		1.57	1.65	1.74	1.82	1.91	2.01	2.11	2.22	2.33	2.44	2.56	2.69	2.82	25.06	93.06
Improvement of Road Junction Ambience	8.50	2.00%		0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.28	0.29	0.31	0.32	0.34	0.35	3.13	11.63
Natural Gas Distribution	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
City Gas Distribution	150.00	0.00%	Private Maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150.00
Health	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Super-specialty hospital at BIMS	350.00	0.00%	BIMS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350.00
TOTAL	2,205.47			33	34	36	38	40	42	44	46	48	51	53	56	522	2,727	
GRAND TOTAL	3,866			56	59	62	65	68	72	75	79	83	87	92	96	895	4,762	

3.19 SPV's Income and Expenditure Statement

Operating Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Property Taxes	13.15	13.15	13.15	18.41	18.41	18.41	24.22	24.22	24.22	32.19	32.19	32.19	38.52	38.52	38.52
Development Charges	0.19	0.17	0.15	0.13	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11
Advertisement Tax	1.13	1.23	1.40	1.59	1.82	2.09	2.40	2.78	3.22	3.75	4.38	5.13	6.02	7.08	8.35
Entry Fees	0.77	0.81	0.85	0.99	1.03	1.09	1.28	1.34	1.41	1.66	1.74	1.83	-	-	-
Unorganized Sector Rentals	0.90	0.95	0.99	1.04	1.09	1.15	1.21	1.27	1.33	1.40	1.47	1.54	-	-	-
Revenues from Commercial Spaces (PPP)	32.58	34.21	35.92	37.72	39.61	41.59	43.67	45.85	48.14	50.55	53.08	55.73	58.52	61.44	64.52
UGD Cess	0.14	-	-	-	-	-	-	-	-	-	-	-	1.00	2.00	3.00
Sanitation Charge	2.17	2.17	2.17	2.38	2.38	2.38	2.62	2.62	2.62	2.89	2.89	2.89	-	-	-
Smart Metering Charge	25.93	25.93	25.93	25.93	25.93	-	-	-	-	-	-	-	-	-	-
Income from Advertising	0.10	0.11	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.16	0.16	0.17	-	-	-
Recovery of Ducting and Cabling through rents	7.67	8.05	8.45	8.88	9.32	9.78	10.27	10.79	11.33	11.89	12.49	13.11	13.77	14.46	15.18
Total	84.74	86.78	89.13	97.19	99.84	76.73	85.91	89.11	92.52	104.58	108.49	112.69	117.93	123.61	129.67
SPV Expenses															
Salaries & Admin	3.02	3.32	3.65	4.01	4.42	4.86	5.34	5.88	6.47	7.11	7.82	8.61	9.47	10.41	11.45
O&M Expenses	56.25	59.07	62.02	65.12	68.38	71.80	75.39	79.16	83.11	87.27	91.63	96.21	101.03	106.08	111.38
Total Expenses	59.27	62.39	65.67	69.14	72.79	76.65	80.73	85.03	89.58	94.38	99.46	104.82	110.49	116.49	122.83
Gross Income/loss	25.47	24.40	23.46	28.05	27.05	0.08	5.18	4.07	2.94	10.20	9.04	7.87	7.44	7.12	6.84
Cumulative Income/loss	25.47	52.16	80.31	115.60	153.05	166.90	187.10	208.01	229.67	260.54	293.03	327.27	364.16	404.06	447.26



CONTENTS

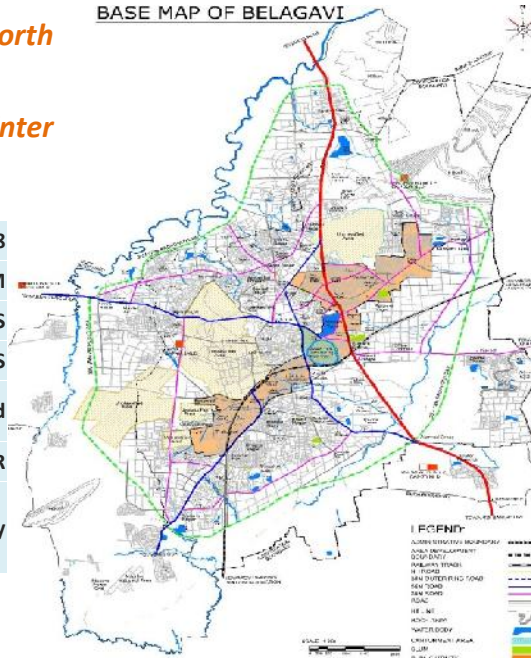
- **CITY PROFILE**
 - Vision & Goals
 - SWOT Analysis
 - Strategic Planning
- **AREA BASED PROPOSALS**
 - Smartness of Proposal
 - Citizens Engagement
 - Result orientation & Process
 - Implementation Framework
- **PAN CITY PROPOSALS**
 - Smartness of Proposal
 - Citizens Engagement
 - Result orientation & Process
 - Implementation Framework
- **FINANCIAL PLAN**

CITY PROFILE

- **Administrative head quarter of north west Karnataka**
- **Legislative head quarter for winter session**

POPULATION	5,07,568
AREA	94.08 SQ. KM
NUMBER OF WARDS	58 WARDS
LENGTH OF ROADS	804.20 KMS
TOTAL WATER SUPPLY UNDER 24 X 7 SCHEME	90 mld
CONNECTIVITY	RAIL, ROAD, AIR
SOLID WASTE GENERATED AND SCIENTIFICALLY DISPOSED	220 tons per day

BASE MAP OF BELAGAVI



CITY VISION

Belagavi, a thousand year old city with a rich heritage and a mosaic of different communities has a vision of an "inclusive, livable, culturally vibrant city emerging as an eminent destination for health, education, ancillary industry and logistics sectors". (HEAL City).

CITY GOALS

Belagavi has set out for itself a calibrated path that will make it a highly livable city.

- 24x7 Potable water for all assuring quality, quantity and service by 2019 with smart metering and e-billing.
- Full coverage of UGD network with sewage treatment plant, recycling and reuse of treated water by 2019 also ensuring 100 % coverage of individual and 150 public toilets.
- Assured continuous electricity supply by augmenting 12% through renewable energy also aiming at reduction of T&D losses by under ground HT< lines by 2019, retrofitting of existing street lights with LED to minimize energy consumption by 2017.
- Achieve 100% door to door collection, segregation, scientific treatment and disposal ensuring waste to energy by 2017.
- Ensuring Intelligent Transport System assured last mile connectivity. Also ensuring of a city and 8 satellite bus terminii by 2019.
- Assured hassle free urban mobility, by completing 4 ROBs, 3 flyovers, under passes, junction improvement, pathway improvement, multi-level parking, dedicated parking zones and also ensuring safety and security through E-surveillance and police by 2018.
- Development of cycle tracks, improvement of footpath for walkability by completing --- and --- km by 2017 respectively.

CITY GOALS

Belagavi has set out for itself a calibrated path that will make it a highly livable city.

- Ensuring the CDP of 2014 implemented with issue of building permissions mandating solar rooftop panels aiming towards provisioning for green building by 2018 along with already mandated rain water harvesting and solar water heaters.
- Achieve 80% coverage of flat roofed government buildings with Solar PV Panels by 2018.
- Ensuring air quality, maintaining desired green cover, developing parks and open spaces, water bodies by 2018.
- Provisioning adequate housing stock to EWS and slum dwellers through integrated vertical development by unlocking the reserved land of 30 acres by 2018.
- CNG and PNG Gas access to domestic, commercial and industrial use of the city by year 2018.
- ICT enablement by creating centralized command center and E-Governance to be fully accomplished through "Belagavi One Center" across the city. Providing 28 services of the ULB by 2017 and 72 services, including processing, to be online by 2018, with all 144 services by 2020.
- Preserving rich heritage Fort structure, developing heritage park with available 160 acres there by promoting cultural history to enable value based growth by 2018.
- New 18 km commercial corridor and Construction of Multi Utility Centers to augment decentralized growth, revenue recovery and promoting mixed land use at Five locations by year 2018.

SWOT ANALYSIS - STRENGTHS

Has a pleasant all year round climate. It is cradled by six rivers, also have augmented the surface water (Recharge & Availability) with ground water through rejuvenated open wells

Equidistant from Mumbai, Bangalore and Hyderabad and just about 100 kilometres to the Western coastline, near Goa.

Excellent connectivity to Major urban center by all modes.

Renowned hub for the production of milk (30% of the State's production), milk products, vegetables, fruits and high value cash crops like also has the largest number of sugar factories in Karnataka.

Acknowledged for its industrial skills, (Foundry, hydraulics & aluminium manufacturing)

India's first - Aerospace SEZ; NIMZ industrial cluster in 10000 acres.

Traditional strength in manufacturing Shahapur Silk Sarees is now augmented by power looms, on which 30,000 people are now directly dependent.

Although Belagavi is a 1000 year old city, almost 80% of the city's area is planned and has green lung space of 80% by having Cantonment area covering 18 sq.km

An educational hub – with three Universities, six medical colleges and several technical, management & arts colleges

Renowned for its healthcare center 10,000 beds the highest per capita in all Karnataka providing primary to advanced medical care.

Belgavi is the destination to which the Karnataka State shifts the entire legislative and administrative functions for two months of the year and the Government functions from the Suvarna Soudha complex which was completed in 2012.

SWOT ANALYSIS

WEAKNESSES

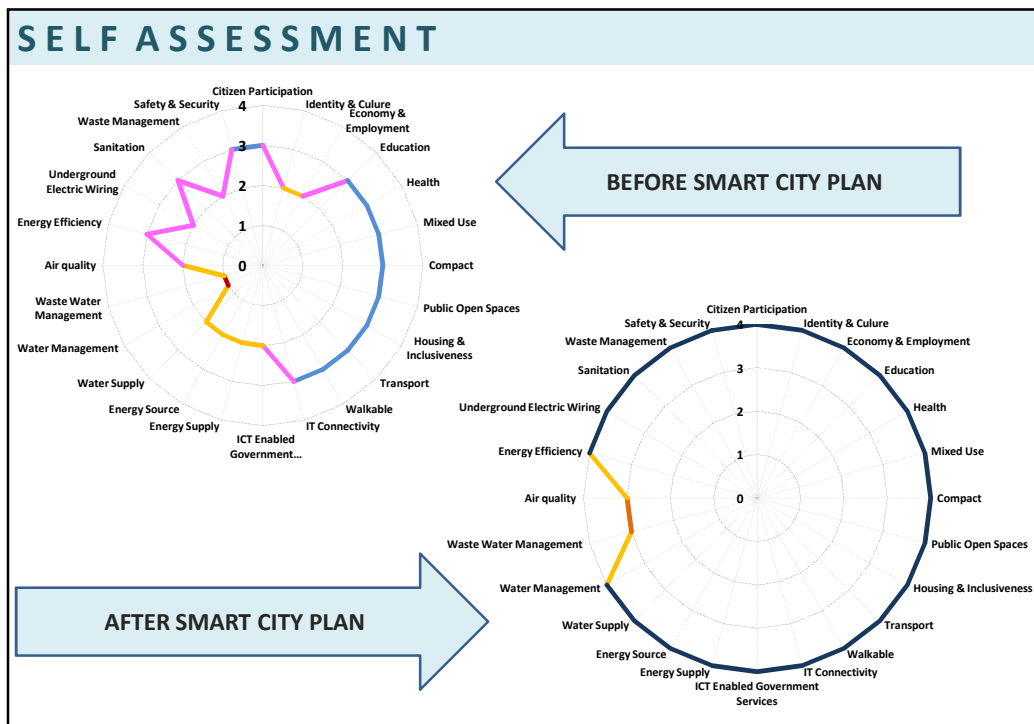
- Congestion in the central old part of the city.
- Absence of ring road increased traffic congestion.
- Only 48% of the city covered with sewerage scheme
- Sewage discharges to open nalla without treatment.
- Shortage of middle and low income housing stock.

THREAT

- Lengthy land acquisition procedures for development of a ring road is increasing the cost and delaying the project.
- The presence of the cantonment on both sides of the city limits extensive development activity in the CBD area.

OPPORTUNITIES

- Location advantage for growth of logistics parks and Container logistics center.
- Availability of skilled manpower- Potential for becoming industrial hub in the region.
- Availability of medical facilities -Potential for development of health tourism sector.
- There is an opportunity to leverage the strength of rural Belgavi in Agricultural, Horticultural and dairy products.
- With many medium and small scale industries, educational institutes and hospitals of national repute, mix of farm economy and dairy production, power loom textile industries,
- Opportunity for planned unlocking of land in the city and its periphery.
- Building upon experience gained in formulating infrastructure projects on PPP format, there is a good opportunity to develop projects on PPP mode

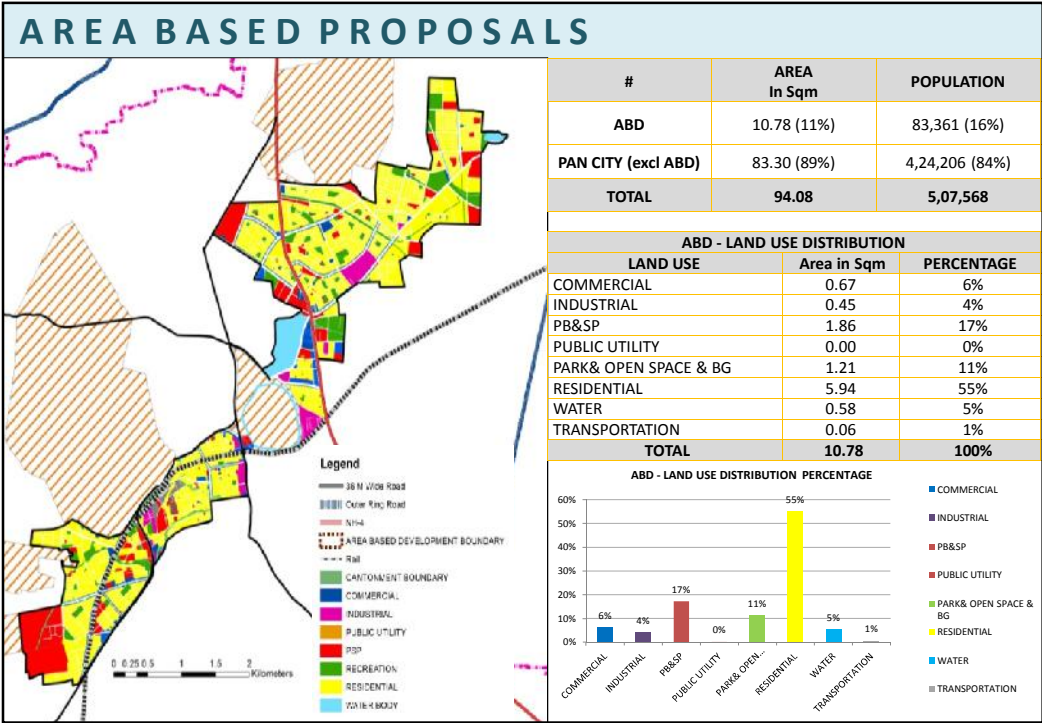


STRATEGIC FOCUS

Developing the city with an integrated approach, synchronizing initiatives under all required sectors and consolidating the results for enhanced citizen experience is the objective of Belagavi's smart city plan.

- We are envisaging cross sector initiatives using ICT to enable better service delivery to the citizens.
- Execution designed and monitored to benchmark each initiative
- There are 3 core themes that are part of the growth trajectory:
 - ✓ ICT enablement to bring in maximum utilization of infrastructure
 - ✓ Integrated planning and execution of dependent sectors to ensure optimization
 - ✓ Citizen centricity to ensure all functionality is focused on delivering value to citizens

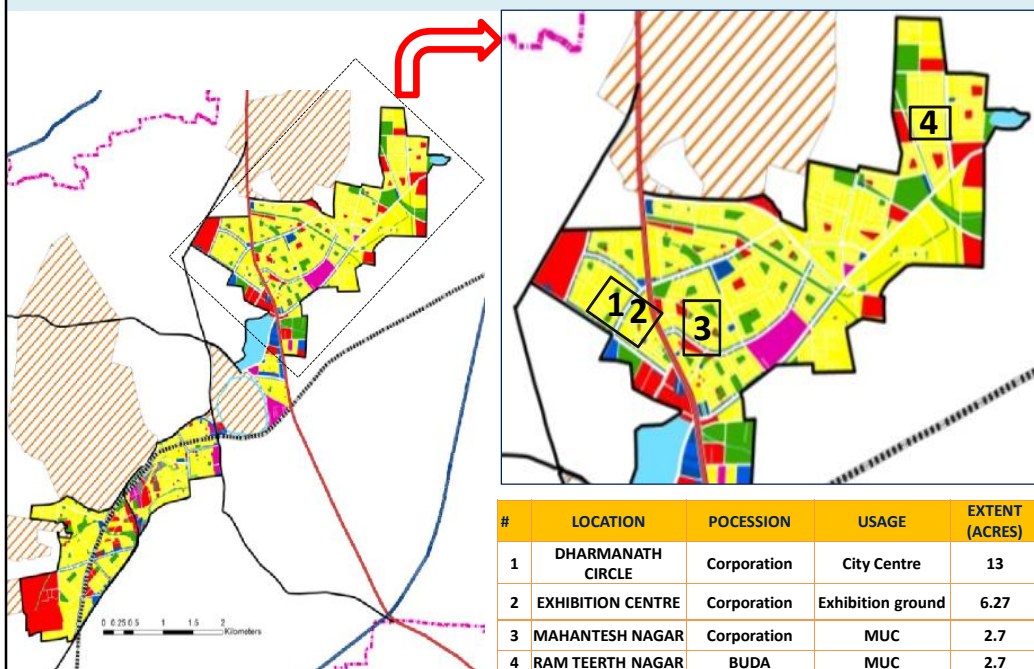
AREA BASED DEVELOPMENT

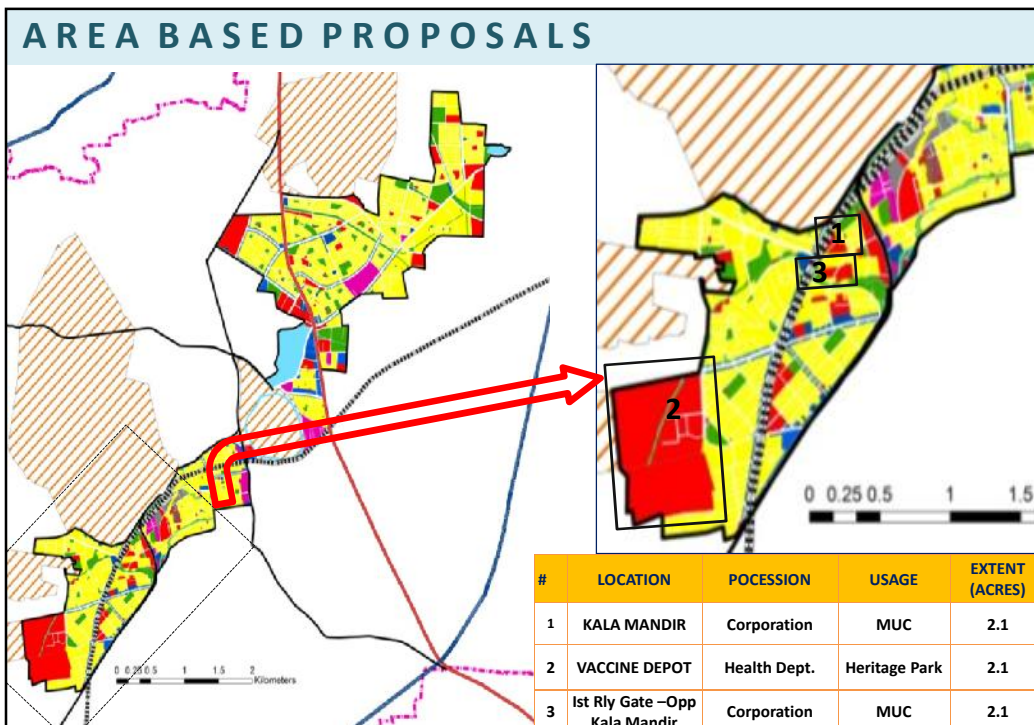
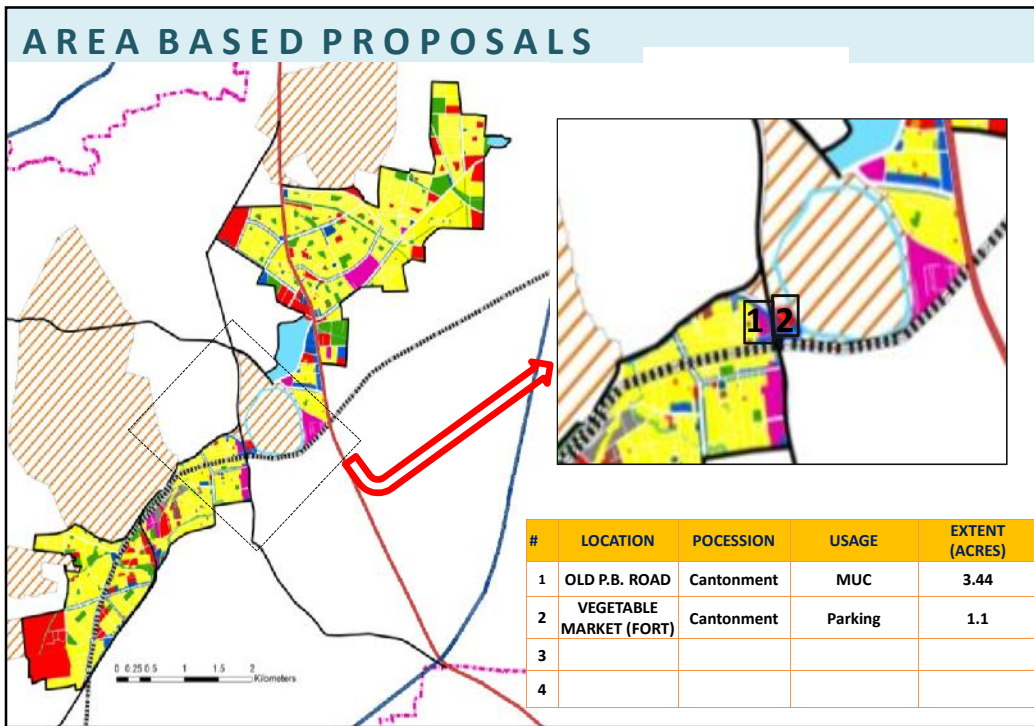


SELECTION OF AREA

- Decentralizing the inner city area
- Backbone of the city & axis of future development
- Enables comprehensive development, through retrofitting strategies of smart city including central transportation hub, location of offices, employment centers, civic centers
- Promotes equitable distribution of utilities service centers.
- Create maximum impact with the smart city initiative to the citizens of Belagavi with a view to achieve a balanced development
- Selection based on overall city profile; inputs from citizens, stakeholders, planning experts, civic officials; and SWOT analysis
- Retains the nature of lung space (18 sq.Km of cantonment area) in the central part of city which complements it
- Augments the future directional growth

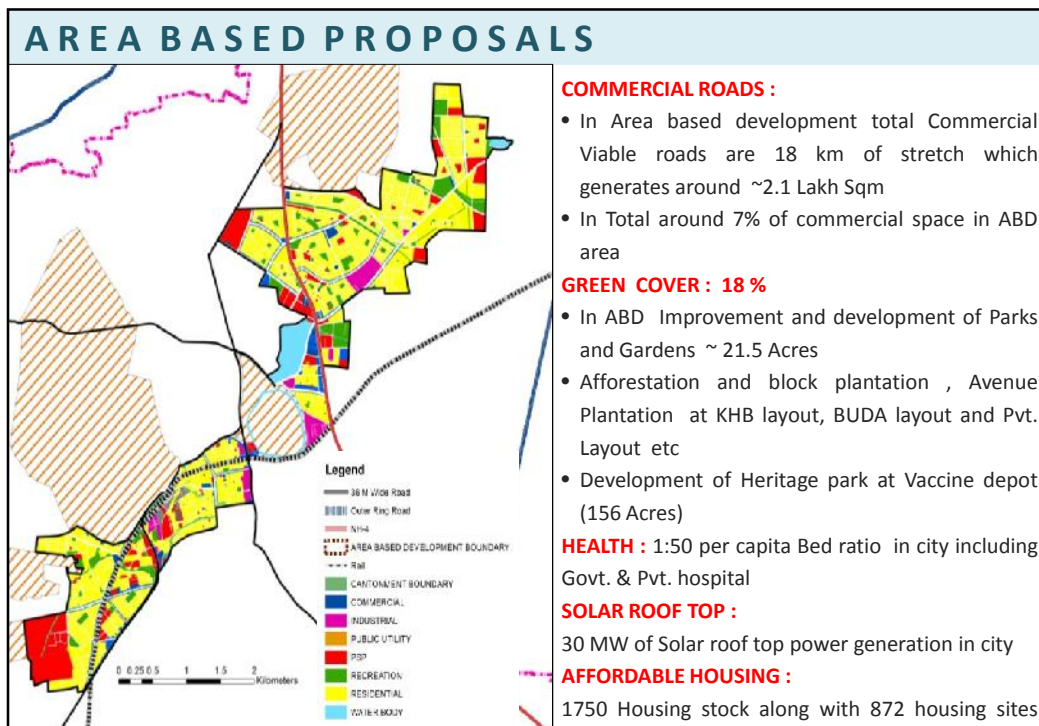
AREA BASED PROPOSALS





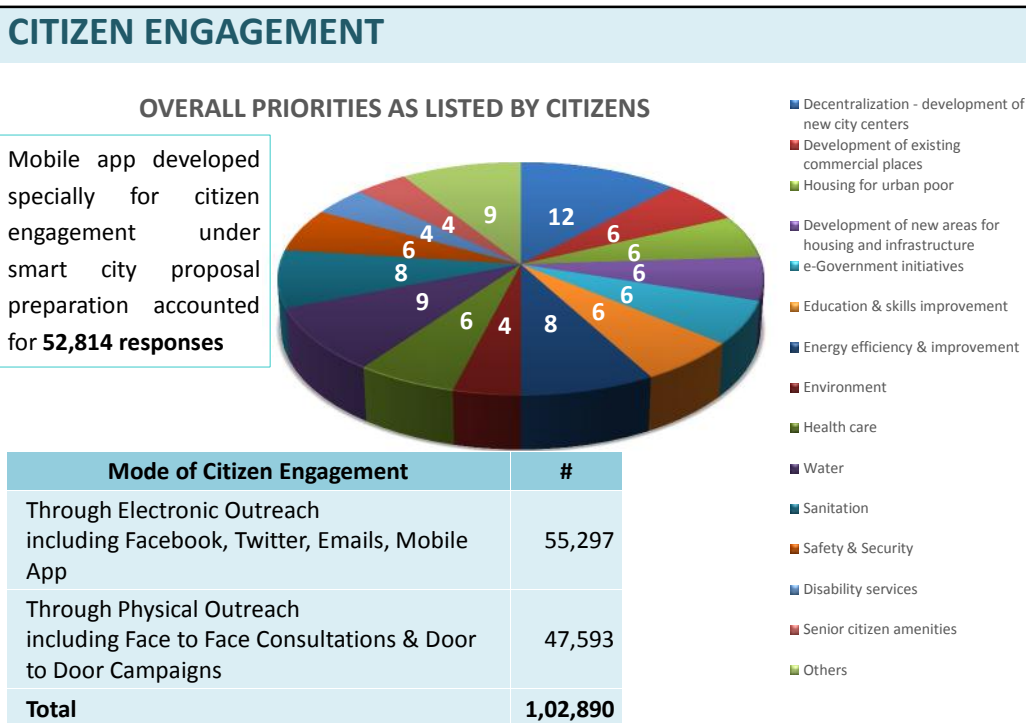
AREA BASED DEVELOPMENT-PROPOSALS	
KEY COMPONENTS	DESCRIPTION
BELAGAVI ONE CENTER- Multi-utilities facilitation centres	<ul style="list-style-type: none"> Public Utility services facilities Amenities for transport (all modes) Informal sector/Public hawkers space Skill Development centre Open plazas Public convenience & amenities space Local shopping Commercial cum Office complex
Conservation & preservation of heritage structure	<ul style="list-style-type: none"> Development of Fort and Precinct, Improvement of Lakes Development of Heritage Park at Vaccine Depot Improvement of Neighbourhood Parks & Recreational Space
Affordable housing	<ul style="list-style-type: none"> Affordable Housing for EWS (1750 Houses & 872 Sites for EWS Housing development)
Non Motorised transport (Walkability and mobility)	<ul style="list-style-type: none"> Footpath UG Ducting Smart Street Lighting Carriageway Improvement <p>Cycle Track UG - HT & LT Line Street Furniture Avenue Plantation</p>
Development of New city centres	<ul style="list-style-type: none"> Shopping cum IT Office Area Skill Development & Incubation Centers Sports Complex Exhibition cum Art Gallery & Children science park at Tilakwadi.

AREA BASED DEVELOPMENT-PROPOSALS	
KEY COMPONENTS	DESCRIPTION
Improvement of public transport	<ul style="list-style-type: none"> Improvement of Central Bus Terminus Smart Bus Shelters
Improvement of mobility	<ul style="list-style-type: none"> Junction improvement, flyovers, underpass & rob
Public convenience & amenities	<ul style="list-style-type: none"> Public Urinals & Toilets Road Side Drinking Water Kiosks, Tourist Guidance enters, Trauma Centre
Assured water supply	<ul style="list-style-type: none"> Providing 24 X 7 water supply by 2019 with Smart metering
Electricity supply and clean energy	<ul style="list-style-type: none"> Renewable energy – supply Solar power & Wind power (meets 15% of the demand) CNG/PNG supply for commercial and households
Sewerage system	<ul style="list-style-type: none"> Construction of STP and Construction of UGD in uncovered Areas
Storm water drainage system	<ul style="list-style-type: none"> Storm Water Drainage System
Waste management	<ul style="list-style-type: none"> Solid Waste Management, RDF plant



RESULT ORIENTATION

Key components	Outcome in 2 years	Outcome in 5 years
Assured water supply	Coverage in the wards identified as per WB project	Coverage in all wards
Electricity supply	Wind power augmentation, Roof Top for government buildings . CNG/PNG for area	Targeted coverage for Solar rooftops. CNG/PNG coverage for city
Waste management	100% coverage for door-to-door collection, segregation	Segregation, scientific treatment for all areas
Improving Road, Circulation Network	Decentralize growth, development of commercial activity, walkability	Multi modal transit – with last mile connectivity
Improvement of Public Transport	Reliable public transport with non-motorized transport options	Multi modal connectivity with monitoring, tracking and para-transit options
Employment generation – Organized sector	Through skill development centers – ITES & Automotive skills	Soft skills / Finishing schools
Employment generation – APMC, Hawker's Spaces	Marketing for agricultural produce Add 200 hawker spaces in organized manner for each new center (on pilot)	Organized vending in multi facility centers, new centers, commercial areas Organized retail
Integrated monitoring	Traffic signals & surveillance through cameras, includes roads & areas	Integrated surveillance throughout the city
Development of Markets, Multi utility centres	7 new market centers with MUC	Encourage development of multi facility centers across the city and improve commercial activity
Parks & Recreational Spaces	Development of 1 major park	Development of 20 parks



PAN CITY SOLUTIONS

PAN CITY SOLUTIONS

e-governance

Ensure citizens can complete transactions through web and smart phone apps for all 144 services provided by the city. Currently only information is available through web channels with payment integration

Transport

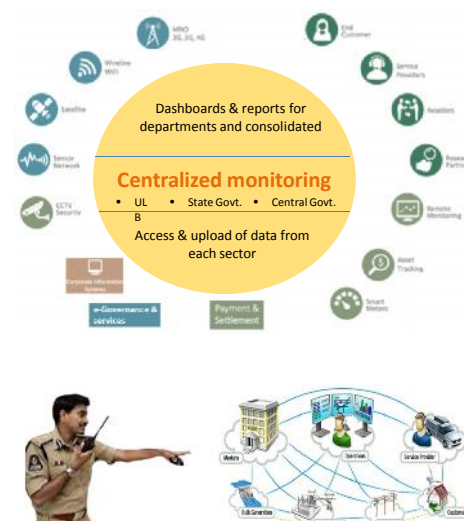
- Road and traffic monitoring through cameras and WVD sensors
- Public transport monitoring through Smart phone app
- Traffic management through road & junction monitoring
- Public convenience kiosks setup at 88 places

Command center

- Enable service delivery and monitoring through Command center

Safety & security

- Enabled through surveillance cameras and integration with Command center and police
- Monitoring cultural events, processions etc and



PAN CITY SOLUTIONS

- Infrastructure**
 - Roads
 - Transport & Traffic
 - Safety & Security
- Services**
 - Healthcare
 - Education
 - Tourism
- Services**
 - E-Governance
 - Citizen services
- Amenities**
 - Water
 - Electricity
 - Waste management
 - Sanitation

ICT Solutions for Centralized Management

Revenues

- Increased efficiency in the fleet operations
- Predictive maintenance and reduced break downs
- Accurate employee incentive schemes
- Increased number of commuters
- Context aware advertisements at bus stop displays

TRANSPORT AGENCY

POLICE

- Security Alert : Bus / bus stop
- Bus / Bus stop Location

COMMUTERS

- Bus arrival time
- Security
- Auto stands info (map)
- Commuter tracking (from start to stop)

PAN CITY SOLUTIONS

Intelligent transport system:

- Using of ICT for intelligent transport system and improvement of mobility for entire city which includes;

A) Priority bus lanes, bus terminals & bus shelters

- Smart Bus shelter includes:
 - Bus information
 - ATM
 - Camera surveillance
 - Routes and navigation
 - Kiosk for citizen service
 - Water dispenser
 - Disability access

B) Para - transit

- Battery operated autos
- Auto-hailing Applications

C) Walkability & non-motorized transport

- Footpath
- Cycle Tracks

- Managing through dedicated lanes for ease of traffic movement
- Monitoring through wireless access points

- Greater control of the bill.
- Saving of water by around 12%
- Meters will also help in finding leaks and fix them faster.
- A smart meter based on Open smart grid protocol (OSGP) that has the ability to reduce load, disconnect-reconnect remotely, and interface to electricity, gas and sewerage meters.

- 210 km of length with smart LED Street light
- Safety and security features – Surveillance camera
- WiFi Connectivity

PAN CITY SOLUTIONS

TRANSPORT AGENCY	POLICE	COMMUTERS
 <ul style="list-style-type: none"> • Bus Location <ul style="list-style-type: none"> • Track the bus • Occupancy : <ul style="list-style-type: none"> • Add / cancel a service • Security <ul style="list-style-type: none"> • Inside bus, bus stop • Driver behavior, Alerts <ul style="list-style-type: none"> • Incentives • Bus health <ul style="list-style-type: none"> • Replace, Maintenance 	 <ul style="list-style-type: none"> • Security Alert : Bus / bus stop • Bus / Bus stop Location <p>Revenues</p> <ul style="list-style-type: none"> • Increased efficiency in the fleet operations • Predictive maintenance and reduced break downs • Accurate employee incentive schemes • Increased number of commuters • Context aware advertisements at bus stop displays 	 <ul style="list-style-type: none"> • Bus arrival time • Security • Auto stands info (map) • Commuter tracking (from start to stop)

RESULT ORIENTATION

Key components	Outcome in 2 years	Outcome in 5 years
E-governance	Enablement of requests for 36 core services through web application and smart phone app	Enablement of automated transaction processing for 144 services through web and mobile app
	Ensure surveillance in 50 junctions, 88 bus shelters, 112 identified locations in the area	Command center integration of all cameras and monitoring points (junctions, roads, commercial centers, Government offices)
	GIS identifiers for houses	Complete integration with Smart meters and tracking – safety & fire incidents
Intelligent transport	Transport integration	Public transport and autos/taxis are integrated with Command center
	Smart phone app integration – Tracking and monitoring	Booking, tracking and last mile connectivity
	Bus shelters within the area with key amenities	Integrated bus shelters and connected transport

FRUGAL INNOVATION

GUIDANCE: ISO/IEC JTC 1 reference model → CSTEP guidelines → PWC baseline report

Best practices:

- Urban Mobility, Smart bus shelters from cities of Barcelona, Amsterdam, Frankfurt and Bagota
- e-Governance from ISO to include the indicators to measure the features required for e-Governance.

TECHNOLOGY: Open Source technologies for the ICT components:

- Ease of implementation with no product deployment required
- No license costs
- Easily integrated with web services and no additional API or features required
- Typically supported for any protocol that is required for the integration

COMMAND CENTER:

- Real-time dashboard that would be developed using responsive UI design

EXISTING INFRASTRUCTURE:

- Meghraj (cloud services) and Paygov (payment gateway)

FINANCIAL PLAN & IMPLEMENTATION PLAN

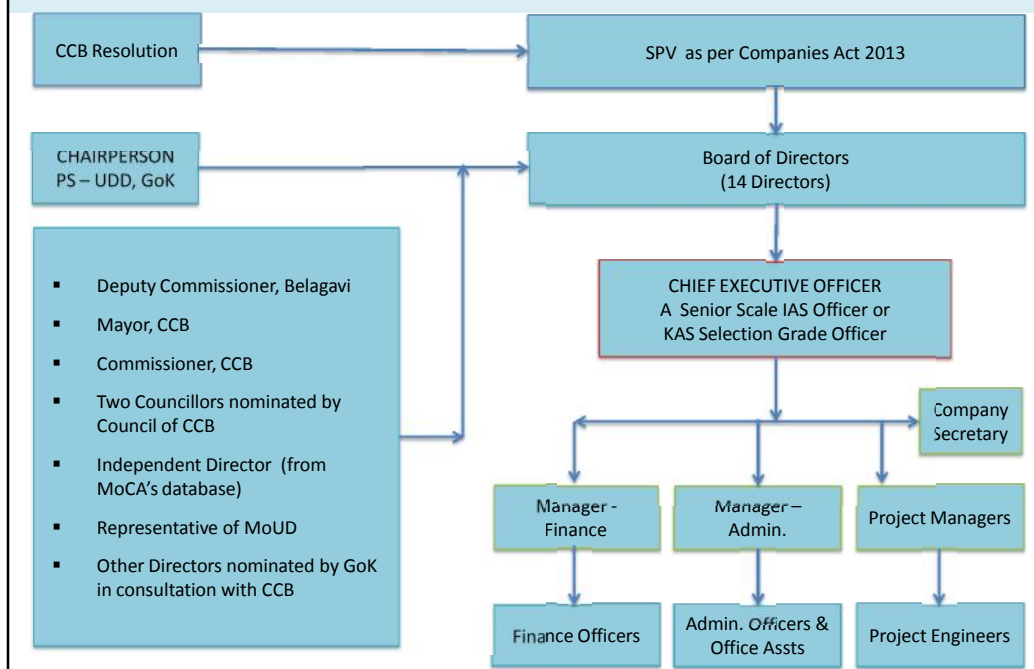
FINANCIAL PLAN									
CONVERGENCE									
Total cost of all Proposals: Rs. 3534.54 Cr.									
PROPOSAL	SFC	14th FINANCE	STATE SPL. GRANT	ULB	CENTRAL GOVT. SCHEMES	SMART CITY	DEPTS.	PPP	TOTAL
ABD	27.75	3.70	65.00	5.75	270.50	641.50	321.00	330.90	1661
PAN CITY	-	-	93.80	129.50	263.25	367.45	676.27	675.20	2206
TOTAL IN RS. CR	27.75	3.7	158.80	135.25	553.25	1007.86	647.27	1006.10	3867

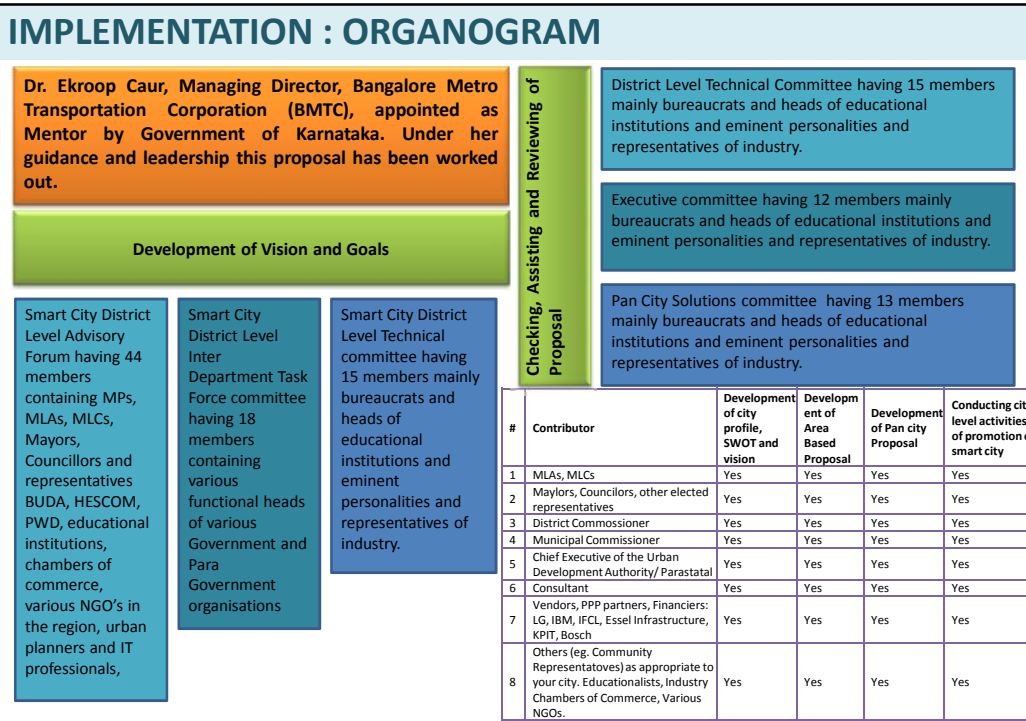
PROPOSED PROJECTS COST ESTIMATES		
SI.No.	AREA BASED PROPOSAL (TOTAL)	Cost in Rs. Cr.
1	Innovative use of open spaces -	
2	Construction of multi utility facilitation centers with green building concept	167.4
3	Parks and Recreational spaces (inclusive of rain water harvesting)	66.0
4	Upgrading the Heritage precincts	35.0
5	Smart water metering	9.0
6	Environment, Energy Efficiency and Renewable Energy	196.5
7	Affordable Housing	127.5
8	Skill Development Center	8.0
9	Under Ground Ducting	62.0
10	Non motorized Transport, Walkability, network connectivity, Paratransit	187.5
11	Urban Mobility	400.0
12	Development of city centers on green building concept	145.75
13	Sewerage System	156.0
14	Public Convenience and Amenities	17.0
15	Solid Waste Management	8.0
16	Storm Water drains and recharge of water bodies	70.0
17	Health : Up gradation of Primary Health Centers	5.00
A	TOTAL COST OF AREA BASED DEVELOPMENT	1660.67

PROPOSED PROJECTS COST ESTIMATES

Sr. No	PANCITY PROPOSALS:	Cost in Rs. Cr.
1	E-governance and IT enablement	173.50
2	Traffic, Transport, Mobility and Intelligent Traffic Systems	340.70
3	Environment, energy efficiency and renewable energy (convergence)	726.27
4	Water Supply and Solid Waste management (convergence)	465.0
5	Natural Gas Distribution (convergence)	150.0
6	Health : Super Specialty Hospital	350.00
B	TOTAL COST FOR PAN CITY PROPOSALS	2205.50
	TOTAL PROJECT COST (A+B)	3866.14

IMPLEMENTATION : SPV STRUCTURE





Thank you