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	Feature	**Definition**	**Scenario 1 (BASE)**	**Scenario 2**	**Scenario 3**	**Scenario 4 (ADVANCED)**	**Self-assessment of the city (for Pan-City Solution) with regard to each feature**	**Basis for assessment and/or quantitative indicator (Optional - only if data exists)**	**Projection of 'where the city wants to be' with regard to the feature/indicator**	**Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G)**
1	**Citizen participation**	**A smart city constantly shapes and changes course of its strategies incorporating views of its citizen to bring maximum benefit for all. (Guideline 3.1.6)**	The City begins identifies priorities and projects to pursue without consulting citizens.	City undertakes citizen participation with some select stakeholders. The findings are compiled and incorporated in some projects or programs. Very few major decisions are shared with -citizens until final projects are unveiled.	City conducts citizen engagement at city level and local area level with most stakeholders and in most areas. The findings are compiled and incorporated in projects or programs.	City constantly conducts citizen engagement with people at each Ward level to incorporate their views, and these shape priorities and development projects in the city. Multiple means of communication and getting feedback such, both face-to-face and online are utilised. The effectiveness of city governance and service delivery is constantly enhanced on the basis of feedback from citizens.	• Mostly Scenario 2. • Awareness programs concerning citizen safety, security and disaster management conducted. • Public participation is limited. • There is no mechanism in place to ensure citizen participation and accountability.	• Based on discussion with MUDA/ SMB officials. • Interaction with citizen representatives.	City aspires that SMB constantly conducts citizen engagement with people at each Ward level to incorporate their views, and these shape priorities and development projects in the city. Shillong wishes to create a digital nervous system for enhanced citizen participation, and rigorous information sharing • Participation of NGOs/ CBOs will be increased by 100% year on year KPI –20% of citizens engaged online with SMB.	• A comprehensive Mobile App (Shillong One App) is proposed to be launched as a Smart Solution to ensure an effective and constant two-way communication between citizen and government. It grounds-up innovation in a league of city government where diverse set of users within and city will be able to co-exist and transact over a single App. • The Mobile based city platform will significantly expand SMB's capacity to produce benefits and deliver outcomes for itself, citizens, businesses, and to impact positively overall economic growth of the city.
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 emphasize 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.	• Mostly Scenario 2. • Shilling preserves ethnic and cultural heritage, yet it boasts of cosmopolitan culture. • Public places are widely used for events and festivities. • New buildings and areas do not necessarily reflect the culture and heritage of the place.	• Based on discussion with MUDA/ SMB officials. • Interaction with citizen representatives.	The city wants to grow as an education hub for the NE Region.. City wants to grow as an Educational and Cultural Hub with tourism and recreational activities. The area development (ABD) project help will help maintain identity of Shillong through enhancement and redevelopment of key project components • Promoting tourism through organized riverfront development, cultural centre and shilling haat to promote crafts activities. • Create a place-making along Umkhrah and making it accessible to public. • Enhance old assembly building area, City Museum and shilling haat to be attractive places for visitors. KPI - Average time spent by tourists in Shillong is 2 days.	1. Making Umkhrah Riverfront as a Place-making recreational area. It includes 1.5km river front development and visitor facilities. 2. Building Shillong haat for promoting cultural significance and evening recreational area. 3. Enhancing quality of Ward's lake and its surrounding 8.5 ha of green area.

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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.	• Mostly Scenario 1. • The economy is mostly Tertiary sector driven. Industrial and manufacturing activity is limited because of hilly terrain. • There is limited Informal sector activity and jobs in the city.	• Based on discussion with MUDA/ SMB officials. • Interaction with citizen representatives. • Census of India 2011.	• City wants that there are adequate opportunities for jobs for all sections of income groups and skill levels. • Leverage presence of educational institutions of repute in Shillong, develop strategic partnerships between industry and academic institutions and government to make skill development program job oriented. • Enhance tourism potential and promote as one of the additional new employment opportunity.	• Tapping additional number of tourists to the city through proposed improvement of Ward's Lake, Umkhrah Riverfront development, boating facilities, city museum, recreational activities and park within the ABD area. It will ensure additional stay of 1 day by each tourist. • Training of tourism guides and other tourism industry shall create livelihood for 200-300 youths per annum
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 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.	• Mostly Scenario 3. • There is presence of wide range of educational institutions at all levels. • Shilling is emerging as an educational hub for the entire NE region. • Educational activities are regularly assessed and database maintained.	• Presence of 5 national level institutes, 5 colleges of Excellence, 6 important schools in Shillong. • Feedback from citizen representatives.	• Citizen aspires that City provides adequate and high-quality education facilities within easily reachable distance of 10 minutes walking for all the residential areas of the city. KPI – Availability of primary school within 500-700m of residence.	Smart city proposal recommends upgradation of upper primary and upper primary schools and secondary schools wherever located inside ABD area with smart infrastructure.
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 specialized health advice with maximum convenience. The city is able to foresee likely potential diseases and develop response systems and preventive care.	• Mostly Scenario 2. • Shilling has a number of hospitals and clinics providing healthcare. • There is limited access to preventive healthcare.	• Feedback from citizen representatives.	• Citizen desires that Shillong 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.	One of the initiatives recommended through Smart City Proposal is developing a Shillong One App, which would enable accessing adequate information about health services available with Shillong by both citizens and tourists from throughout the world.

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6	**Mixed use**	**A Smart City has different kinds of land uses in the same places; such as offices, housing, and shops, clustered together. (Guidelines 3.1.2 and 3.1.2)**	The city has mostly separated uses and areas are focused either on residential, commercial, or industrial, with little co-existance of uses. The average resident cannot walk to the closest market or shops near his or her home. For almost everyone, going to work or going shopping for basic needs requires a journey by automobile or bus of more than 15 minutes. Land use regulations prevent putting commercial or office locations in residential neighborhoods and vice versa.	In some parts of the city , there is a mixture of land uses that would allow someone to live, work, and shop in close proximity. However, in most areas, there are only small retail stores with basic supplies near housing. Most residents must drive or use public transportation to access a shop for food and basic daily needs. Land use rules support segregating housing, retail, and office uses, but exceptions are made when requested.	Most parts of the city have housing, retail, and office buildings in close proximity. Some neighborhoods have light industrial uses within them (e.g., auto repair, craft production). Land use rules allow for mixed uses.	Every part of the city has a mix of uses. Everyone lives within a 15-minute trip of office buildings, markets and shops, and even some industrial uses. Land use rules require or encourage developers to incorporate a mixture of uses in their projects.	• Mostly Scenario 1. • There is no provision of mixed use development in prevailing building bye laws.	• Master Plan for Greater Shillong 1991-2011. • Based on discussion with MUDA/ SMB officials. • Feedback from citizen representatives. • Field visits to new development areas within Greater Shillong Development Area.	• Every part of the city has a mix of uses. • All areas within a 15-minute walking distance to retail shops with mixed uses. • Regulations require or encourage developers to incorporate a mixture of uses in their projects. • 100% residences having daily needs of retail, parks, primary schools and recreational areas accessible within 500m and 10-15 minutes walking distance. Mixed land use along key transportation network of the city facilitated by organized multi-level parking areas.	• The current City structure is having mixed use at many locations but unorganized. Master plan of shilling city is under progress which can take care of Mixed use activities in an organized manner. • Besides, one of the initiatives recommended through Smart City Proposal in the ABD area is to encourage a mixed-use zone with residential, commercial and recreational use in a clustered manner. It will also show-case the usefulness of mixed use development. 4 areas have been proposed within ABD area along the main transportation network for multi-level parking with mixed use development.
7	**Compact**	**A Smart City encourages development to be compact and dense, where buildings are located close to one another and are ideally within a 10-minute walk of public transportation, forming concentrated neighborhoods. (Guidelines 2.3 and 5.2)**	The city is expanding rapidly at its periphery into undeveloped land, rural or natural areas, or along industrial corridors - both formally and informally. Formal new development is occurring in a way that is "sprawling," meaning that the buildings spread across a wide area and are far from one another. Residents or tenants find it easier or safer to travel by automobile because it takes a long time to walk between destinations and there are busy roads separating buildings. Large pockets of land in the inner-city are vacant. New developments at the periphery tend to be large-scale residential developments, often enclosed with a gate and oriented to the automobile.	The city has one or two high density areas - such as the city center, or historic areas, where buildings are concentrated together and where people can walk easily from building to building and feel as though they are in center of activity. Most of the city consists of areas where buildings are spread out and difficult to walk between, sometimes with low-density per hectare. Regulations tend to favor buildings that are separated from one another, with lots of parking at the base and set-back from the streets. The city likely has some pockets of under-utilized land in the center. New formal developments at the periphery tend to be large-scale residential developments, often enclosed with a gate and oriented to the automobile.	The city has multiple high density clusters that are easy to walk around where buildings are close together. However, the city actively encourages development to occur on under-utilized parcels of land into high-density, walkable areas. When new formal large-scale development projects happen at the periphery, they are encouraged to be dense and compact, with buildings that are close together and line the streets. The city actively encourages or incentivizes re-development of under-utilized parcels in the inner-city, especially those located close to public transportation.	The city is highly compact and dense, making the most of land within the city. Buildings are clustered together, forming walkable and inviting activity centers and neighborhoods. Regulations encourage or incentivize re-development of under-utilized land parcels in the city center. Buildings are oriented to the street — and parking is kept to a minimum, located below ground or at the back of buildings. Public transport and walking connects residences to most jobs and amenities. Residential density is at an optimal with affordable housing available in most areas.	• Mostly Scenario 1. • Urbanization is happening outward into peripheral and fragile areas. • A large scale redevelopment may help contain urban sprawl and make the city compact to some extent.	• Master Plan for Greater Shillong 1991-2011. • Discussion with MUDA/ SMB officials. • Feedback from citizen representatives. • Field visits in city core (ABD area), and new development areas within Greater Shillong.	• City desires that all areas within 10-15 minutes walking distance to retail and social infrastructure facilities. • Most of employment areas are located within 30-45 minute travel distance from residence. • Regulations encourage or incentivize re-development of under-utilized land parcels in the city center/police bazaar area. • Buildings are oriented to the street and parking is kept to a minimum, located below ground or at the back of buildings instead of parking on roads. Public transport/Maxi cabs and walking connects residences to most jobs and amenities. Residential density is at an optimal with affordable housing	• Improved public transport and NMT for connecting residential and other uses with better parking management strategies.

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									available in most areas.	
8	**Public open spaces**	**A Smart City has sufficient and usable public open spaces, many of which are green, that promote exercise and outdoor recreation for all age groups. Public open spaces of a range of sizes are dispersed throughout the City so all citizens can have access. (Guidelines 3.1.4 & 6.2)**	The city has very few usable public open spaces and very few usable green spaces. Available recreational spaces are located far away and are dispersed at long distances around the city. The few available public open spaces offer a limited variety of experiences for all sections of population and age groups such as places for sport, places for rest, and places for play.	A variety of public open spaces are available in some neighborhoods, but are not available in all the areas of the city or are located far away from residential areas -Many of the open spaces have access restrictions, or are not well-maintained. A variety of types of public open spaces may be lacking, such as natural areas, green areas, parks, plazas, or recreation areas.	Most areas of the city have some sort of public open space. There is some variety in the types of public spaces in the city. However, public spaces are sometimes not within easy reach or access of more vulnerable populations and are more restricted in poorer neighbourhoods.	Public open spaces are well dispersed throughout the city. Every residential area and work space has access to open space within 10 minutes walking distance. Open spaces are of various types - natural, green, plazas, parks, or recreation areas - which serve various sections of people. Public spaces tend to truly reflect the natural and cultural identity of the city.	• Scenario 1.	• Per capita open space is negligible in the city with limited greens and open spaces. • Citizen feedback suggests there is serious shortage of space for public interaction/ recreation. • Field visits in ABD also suggest a paucity of public open spaces.	• Green area near Ward's Lake to be developed as organized parks, which serve various sections of the people. • Every residential area and work space will have access to open space within 10 minutes walking distance.	• Riverfront development – Shillong is endowed with a large stretch of open/recreational area, which can be potential locations of recreational use. • Umkhrah riverfront development will set an example. This would be replicated throughout the city. • Provided more parks and open spaces and recreational areas within walking distance in ABD area. • Organized Open areas in Shillong Haat encourage same activities to be replicated throughout the city.
9	**Housing and inclusiveness**	**A Smart City has sufficient housing for all income groups and promotes integration among social groups. (Guidelines 3.1.2)**	Housing is very limited and highly segregated across income levels. Population growth far exceeds the creation of new housing. The poor live in informal settlements with limited to no access to basic services, and are concentrated in a few areas. The wealthy live in separate enclaves. Those in the middle have few , if any options.	Housing is available at most income levels but is highly segregated across income levels. Population growth slightly exceeds the creation of new housing. The wealthy and the middle class have housing that meets their needs at costs appropriate to their income. The poor live in informal settlements.	Housing is available at all income levels, but is segregated across income levels. The growth of supply of housing almost meets the rate of population growth. Increasingly, lower and middle-income people can find housing in areas that are conveniently located.	A wide range of 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	• Mostly Scenario 1. • About half of its people live in sub-standard and slum houses. • Slum re/development may need to be made more rigorous.	• AMRUT reports. • Feedback from citizen representatives. • Based on discussion with MUDA/ SMB officials.	• City wants that 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.	• Improving living condition of neighbourhoods by access to basic infrastructure.
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.	• Mostly Scenario 1. • Public transport is limited and inefficient. • Roads are narrow, and parking facility insufficient. • The city should be planned to minimize motor transport.	• Private vehicle ownership is over 45%. • Average trip length for work is approximately 5 km. • Average trip length for shopping and recreational trips is 3 km each. • Road covered with foot path is only less than 5% of the total length of roads. • City bus transport system is inadequate and only 11-12% are uses public transport. • Maxi cabs and private taxis caters to substantial share of intra-city	• 100% of major roads and minor roads are developed with segregated space for walking. • Public transportation network covers the entire city. Plenty of options of public transport are available and affordable for all sections of the society. • Intelligent traffic management system including synchronized traffic signals along all major roads with one way movement.	• Retrofitting of over 33 km road network within ABD area, with defined carriageway, side-walk, smart streetlights with pollution sensors, wi-fi hot spots and so forth. • Walking track along Umkhrah River, NMT and foot paths along other Nala (drain), pedestrian foot paths and NMT along all key road network, smart parking and so forth are proposed to be developed within ABD area. • Intelligent traffic management system including synchronized traffic

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								passenger movement, as they are cheaper.		signals along all major roads. Multi-level parking areas developed around Police Bazaar and other core commercial areas and other Strategic locations with efficient public transport for last mile connectivity in ABD area.
11	**Walkable**	**A Smart City's roads are designed equally for pedestrians, cyclists and vehicles; and road safety and sidewalks are paramount to street design. Traffic signals are sufficient and traffic rules are enforced. Shops, restaurants, building entrances and trees line the sidewalk to encourage walking and there is ample lighting so the pedestrian feels safe day and night. (Guidelines 3.1.3 & 6.2)**	The city is designed mainly for the automobile. Daily life without a car requires long bus rides. Walking is difficult and often dangerous; there are few pavements, existing pavements need repair and lack trees to provide shade for pedestrians, and marked pedestrian crossings are rare. New buildings have their main entrances set-back from the street, sometimes with large driveways or parking lots separating them from the street, and sometimes are enclosed by gates. Traffic signals are often disobeyed	Older areas of the city see a mix of pedestrians, cyclists, and vehicles but newer areas are focused mainly on the automobile. In the new areas, there are few pavements and main entrances to new buildings are not accessible from the front of the street. large driveways or parking lots often separating them from the street, and sometimes are enclosed by gates. In these areas, traffic signals are disobeyed.	The city has a good network of pavements and bike lanes. Buildings in most areas of the city are easily accessible from the pavement. However, traffic signals are sometimes disobeyed and it can feel difficult to cross the street.	The city is highly walkable. Pavements exist on every street and are maintained. Trees line many sidewalks to provide shade for pedestrians. Buildings in most areas of the city are easily accessible from the sidewalk. Traffic signals control the flow of automobiles and are enforced. A network of bike lanes exists to promote cycling as a means of transport. Traffic rules are followed and enforced with great seriousness.	• Mostly Scenario 1. • The city is currently walker unfriendly, with limited and ill maintained pavements.	• Road covered with foot path is only less than 5% of the total length of roads. • Only few intersections are signalized and forms proper geometry. But, they are not synchronized. • Most roads do not have foot paths for safe walk. Pedestrian crossing at several intersections is missing and road safety and sidewalks are not given paramount importance in street designs	• 100% of the major roads are developed with segregated space for walking with development of footpaths over both sides of roads. • 100% of the intersections are signalized with pedestrian crossing facility. • Improvement of road geometry of 12 major intersections within ABD area. • The citizens desire that the city has safe walkable road network, considering its significant tourist footfalls. City wants that the pavements exist on every street and are maintained. Trees line many sidewalks to provide shade for pedestrians.	• CCTV cameras have been installed in the city including all the major intersections to monitor pedestrian safety as well. • Retrofitting of over 33 km road network within ABD area, with defined carriageway, side-walk, smart streetlights with pollution sensors, wi-fi hot spots and so forth. This would be replicated throughout the city.
12	**IT connectivity**	**A Smart City has a robust internet network allowing high-speed connections to all offices and dwellings as desired. (Guideline 6.2)**	City has no major plans to bring increased high speed internet connectivity to the public.	The city has made plans to provide high speed internet connectivity through the existing framework.	The city makes has high speed internet connectivity available in most parts of the city.	The city offers free wifi services to provide opportunity for all the citizens to connect with high speed internet across the city.	• Mostly Scenario 1. • The internet connectivity is limited and speed slow.	The high speed internet connectivity is not available in most parts of the city provided by various service providers.	• 100% wi-fi coverage throughout the city with fibre optics to be laid in the pan city proposal. • Dedicated optical fiber cable (OFC) network and digital platform is proposed.	• Implementation of dedicated OFC will enable data transfer for all G2G and G2C services. • Wi-fi enabled ABD area, which will be replicate in other parts of the city BSNL is keen to provide such facility throughout the city.
13	**ICT-enabled government services**	**A Smart City enables easy interaction (including through online and telephone services) with its citizens, eliminating delays and frustrations in interactions with government. (Guidelines 2.4.7 & 3.1.6 & 5.1.4 & 6.2)**	Essential Government services are not linked with online platforms. Paper intensive interactions with the local Government continues. 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	• Mostly Scenario 2. • Though essential government services are linked with online platforms, there is limited availability of data to monitor service delivery. • The paper based services are very much in practice.	• Grievance redressal system is available online through SMB website only. • SMB is working on providing a common platform for all the government institutions through dashboards.	• All major services are provided through online and offline platforms making only 15-20% of the C2G and G2C transactions are made online. • Citizens and officials can access information on accounting and monitor status of projects and programs through data available	• Integrated City Operations Centre (ICOC) is proposed as pan city smart solutions, will act as nerve centre for aggregating data and information from different applications and enable SMB to manage city as a single operational unit.

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						shares information and enhances internal governmental coordination.			on online system. Data infrastructure system shares information and enhances internal governmental coordination.	• It will deliver services to mobility functions like city transportation, traffic management services, parking management, etc. Establishment of Shillong One App will be another platform, which will enable the development of a whole new set of G2C, G2G, G2B, G2E, C2C, B2C, applications and services. Shillong being a tourism city, the application needs to lend services to tourists to ensure all services like accommodation, travel, food, health and safety services can be availed from single application on mobile.
14	**Energy supply**	**A Smart City has reliable, 24/7 electricity supply with no delays in requested hookups. (Guildeline 2.4)**	There is only intermittent electricity supply with regular power shedding. Many residents have to plan their days around when power is available.	Electricity supply and loads are managed as per demand and priority for various functions with clear scheduling, with electricity being available in many areas for most hours of the day.	Electricity is available in most parts of the city for most hours of the day but some areas are not so well-served. Smart metering exists in some parts of the city but not all.	Electricity is available 24 x 7 in all parts of the city with smart metering linked to online platforms for monitoring and transparency.	• Mostly Scenario 1. • The power supply is unreliable.	• MeECL is responsible for power supply within Shillong city. Electricity is available to all parts of the city. • Total ATC losses are reduced from 34% in 2012-13 to 27% in 2014-15. Total scheduled outages in 2012-13 were for 3-4 hours, which now got reduced zero	• Electricity is available 24 x 7 in all parts of the city with smart metering linked to online platforms for monitoring and transparency. • City is covered with underground electric cabling for safe distribution of electricity.	• Smart City proposal recommends removal of surface electricity wiring and laying of underground electric cables, shifting of transformers that are hindrance to smooth flow of traffic and pedestrians on all roads. • Besides, in order to increase monitoring of the metered consumption, it is proposed to install smart metering for all consumers (residential, commercial and industrial). The smart meters would have provisioning for load curtailment during peak load hours.
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 is the city is produced through renewable sources. There are long term targets for higher renewable energy capacities and the city is making plans to achieve these.	At least 10% of the energy used in the city is generated through renewable sources. The city is undertaking long-term strategic projects to tap renewable sources of energy in its region/beyond to increase the percentage of renewable energy	• Mostly Scenario 2. • The state government has announced its commitment to promote solar energy through a policy on non-conventional energy. • Shillong Smart City project is the rightful opportunity for implementing this policy.	• City at present primary depend on electricity generated from non-renewable sources, being distributed by MeECL. • The overloading on 11kV lengthy feeders is resulting into poor voltage regulations as well for.	• 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.	• Increasing power supply through solar energy in ABD area so that share of non-renewable sources accounts for at least 10% in ABD area. The same will be replicated in other parts of the city. • Provision of solar umbrellas at kiosks along Riverfront

A	B	C	D	E	F	G	H	I	J	K
	Feature	**Definition**	**Scenario 1 (BASE)**	**Scenario 2**	**Scenario 3**	**Scenario 4 (ADVANCED)**	**Self-assessment of the city (for Pan-City Solution) with regard to each feature**	**Basis for assessment and/or quantitative indicator (Optional - only if data exists)**	**Projection of 'where the city wants to be' with regard to the feature/indicator**	**Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G)**
						sources.		• The old lines have multiple joints in between leading to increase in effective resistance of the line and hence higher technical losses. No solar power generation except 3000 Solar Street lights in the city.		development. Provision of solar photovoltaic paneling on all government and institutional building roof tops.
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%.	• Mostly Scenario 2. • The city has an upgraded water supply system. • There are though no fixed targets to achieve quality and optimal water supply.	• Distribution network covers 75% of the households which will complete to 100% by April 2017. • Supplies 78 LPCD water • No smart metering. • NRW accounts for as high as 58%. Slums covered with water stand post.	• 100% of the city household supplied with 135 LPCD of water daily. NRW is reduced to less than 15%.	• Ensure that the ABD area is implemented with 100% service connection, 100% distribution network with retrofitting of 33 km of distribution network, Smart metering, Leak detection and SCADA Automation system.
17	**Water management**	**A Smart City has advanced water management programs, including smart meters, rain water harvesting, and green infrastructure to manage stormwater runoff. (Guideline 6.2)**	The city does not measure all its supply. It does not recycle waste water to meet its requirements and rain water harvesting is not prevalent. Flooding often occurs due to storm water run-off.	The city has meters for all its water supply but lacks mechanisms to monitor. Water wastage is very high. Some, but not much, rainwater harvesting exists.	The city has meters for all its water supply with some smart mechanisms to monitor. Rainwater harvesting systems are installed and storm water is collected and stored in water bodies. However, recycling of waste water and reusage of storm water is limited.	The city has meters for all its water supply. It includes smart mechanisms to monitor remotely. Rainwater harvesting systems are installed and utilised through the city and storm water is collected and stored in water bodies and treated for usage. Recycled waste water is supplied for secondary uses.	• Mostly Scenario 1. • Rainwater harvesting is made mandatory in building bye laws.	• City doesn't have household water metering system. • Distribution system is manually operated.	• The city is scientifically managed water management system. • No smart metering in the city. • Rainwater harvesting systems are not available in the city. • Natural drain network covers the most of the city.	• Ensure that the ABD area is serviced with water supply with 100% metering at households level and bulk metering wherever needed. • Water supply real time monitoring through SCADA Automation system. • Rainwater harvesting is installed at all government and institutional premises.
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.	• Mostly Scenario 1. • There is no sewage system in place.	• At present, Shillong City has no sewerage system. • Households have individual septic tanks disposal connected to nearby open drains. • At present, septage management is not organized properly. Cleaning of septic tanks is being done by the households as and when they are filled-up. • Private operators are cleaning the septic tanks using sucking machines and disposing into natural nalahs/ open places. The septic tank cleaning	• 100% of households are covered to sewerage system. • 100% sewerage collection and treatment. 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.	• Ensuring that the ABD area is serviced with 100% coverage of sewerage system. • Ensure that a 5 MLD STP (with tertiary treatment) is established within ABD area, which will not only meet the demand from ABD but also parts of the city sewer, currently flowing through Umkhrah River/Nala.

A	B	C	D	E	F	G	H	I	J	K
	Feature	Definition	Scenario 1 (BASE)	Scenario 2	Scenario 3	Scenario 4 (ADVANCED)	Self-assessment of the city (for Pan-City Solution) with regard to each feature	Basis for assessment and/or quantitative indicator (Optional - only if data exists)	Projection of 'where the city wants to be' with regard to the feature/indicator	Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G)
								duration ranging from 1 to 5 years, depending on the size of septic tank. Some of the households have connected toilet disposal into road/drain side open sullage drains		
19	**Air quality**	**A Smart City has air quality that always meets international safety standards. (Guideline 2.4.8)**	City does not have plans, policies or programs to improve the air quality. Systems to monitor air quality are absent.	City has programs and projects to monitor air quality and spatializing the data to ascertain reasons for degrees of pollution in the air. A few strategies to decrease air pollution have been implemented.	City has programs and projects to monitor air quality and spatializing the data to ascertain reasons for degrees of pollution in the air. Pollution levels are acceptable.	The city has clean air by international standards. Live Air quality monitoring cover the entire city and data of air quality are mapped.	• Scenario 1.	• Shillong city, at present, does not have any plan, policies or programs to improve air quality. The system to monitor air quality are also absent in the city.	• The city has clean air by international standards. Live Air quality monitoring cover the entire city and data of air quality are mapped.	• Smart city proposal recommends installation of air quality surveys to at several locations permanently to collect and monitor the data at regular intervals.
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 1.	The city does not have any policy, controls, programs or incentive mechanism to promote energy efficiency in buildings.	• All the existing old and new public buildings to be employed with 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.	• Increasing power supply through solar energy in ABD area so that share of non-renewable sources accounts for at least 10% in ABD area. The same will be replicated in other parts of the city. • Provision of solar umbrellas at kiosks along Riverfront development. Provision of solar photovoltaic paneling on all government and institutional building roof tops.
21	**Underground electric wiring**	**A Smart City has an underground electric wiring system to reduce blackouts due to storms and eliminate unsightliness. (Guideline 6.2)**	City does not have plans for underground electric wiring system.	More than 40% of the city has underground electric wiring system.	More than 75% of the city has underground electric wiring system.	More than 90% of the city has underground electric wiring system.	• Scenario 1.	The city does not have underground wiring system so far.	More than 90% of the city has underground electric wiring system	• Ensuring laying of underground electric cabling of nearly 33km length within ABD area. • 7099 smart meeting will be provided with in ABD area 70 Transformers will be shifted and beautified within ABD area.
22	**Sanitation**	**A Smart City has no open defecation, and a full supply of toilets based on the population. (Guidelines 2.4.3 & 6.2)**	Many parts of the city do not have access to sanitation infrastructure and facilities.	Sanitation facilities are available to 70% of the city's population.	Sanitation facilities are available to 90% of the city's population.	Sanitation facilities are available to 100% of the city's population.	• Scenario 1.	• Nearly 9% of the HHs doesn't have access to individual toilet.	Sanitation facilities are available to 100% of the city's population.	Providing Public toilets and Individual toilets in ABD area.
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**	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	• Scenario 1.	• SMB area 46% of the waste generated is collected. • Only 43% households have facility of door to door collection or Community Bin	• 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	• Providing smart bins and establishment of waste to energy plant recycling plants in ABD area. • Providing 3 bin kits to every household for segregation of solid waste at source.

A	B	C	D	E	F	G	H	I	J	K
	Feature	Definition	Scenario 1 (BASE)	Scenario 2	Scenario 3	Scenario 4 (ADVANCED)	Self-assessment of the city (for Pan-City Solution) with regard to each feature	Basis for assessment and/or quantitative indicator (Optional - only if data exists)	Projection of 'where the city wants to be' with regard to the feature/indicator	Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G)
		2.4.3 & 6.2)				used for gardening in the city. Energy creation through waste is considered.		facility rest of the 37% households utilize services of SMB Truck coming to the areas to collect waste. 9% households throw their waste into nearby Nala, stream or drain. 11% households do not have any option hence either throw their waste in nearby open land or use it for fire fuel. • Garbage collection points and routes are already identified, needs efficient mechanism for collection and disposal of waste	used for gardening in the city. • Energy creation through waste is considered. • Requirement of innovative approach for Bio-Medical Waste (plant established in 2007 is outdated), Industrial waste and Construction/ Demolition Waste	• Awareness programs to be conducted to provide knowledge to citizens about segregation of waste.
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 1.	• Shillong city falling under High Risk Zone –V & needs the following: • Earthquake resistant Building regulations • Disaster management initiatives at district level • Prevention and Rehabilitation of Soil erosion and landslides by construction of Retaining Walls and embankments. • Crime statistics under IPC case registered are: in 2013: 1127, 2014: 1327, & 2015: 1446. • No of Crimes against women suggests registered cases in 2014: 173, and 2015: 105 • No. of accidents 50 traffic fatalities, 250 injuries. • CCTV's at 30 locations (including 8 major junctions) with 90 bullet cameras and 30 PTZ cameras; 8 network video and other radios recorders.	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 for installation of CCTVs at all major junctions and every public space within ABD Area. • Provision of Shillong Distress Helpline number in an integrated manner for any emergency activity within the city.

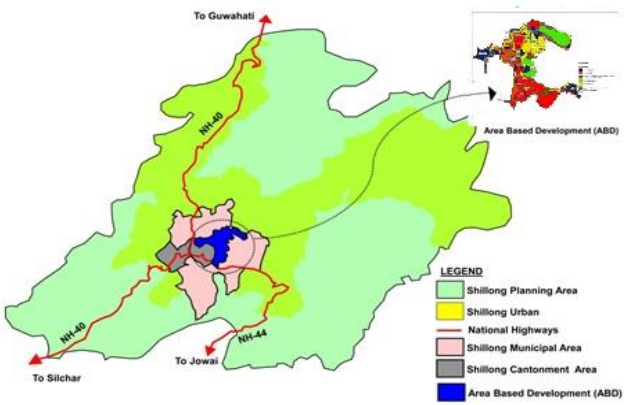
3.1 City Profile

Capital City: Shillong is the capital city of Meghalaya and only city in the state over 0.1 million Population

Tourism Destination: Shillong is major tourism gateway to Meghalaya with 0.72 million domestic & 0.09 foreign tourists visiting

Education Hub: Historically Shillong has been educational hub. Institutions like IIM, NIT, NEHU, NIFT are located in Shillong

Greater Shillong Planning Area



GSPA

Population 3,94,911

SMB

10.36 Sq.km

Population 1,43,229

ABD

Population 17,494

• WATER SUPPLY NETWORK

85% Population covered by network, 78 LPCD, 0% Metering, 58% NRW

• SEWERAGE NETWORK

0% Population covered by network, 0% collection/treatment of wastewater

• SOLID WASTE MANAGEMENT

125 Tons Waste Generated Daily
41% Collection Efficiency
No Segregation at Source

• TRANSPORT NETWORK

356 Km Road Lengths. 15 km/hr Av. Speed 240 Buses & 140 shared cabs for Public Transport
62,000 Registered Vehicles

• POWER SITUATION

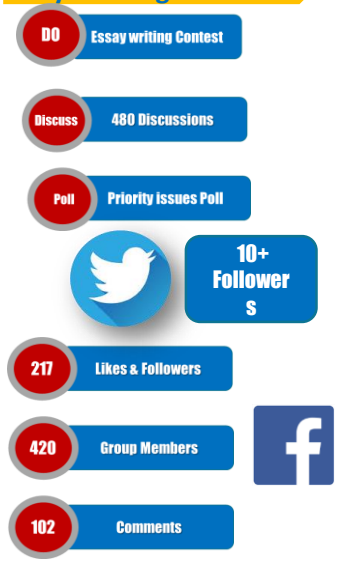
- No power shortage in the city.
- Scheduled outages average 10 minutes a day.
- Unscheduled outages are average 6 hours in 3 months.

3.2 Citizen Engagement

Tools & Engagement Methods used in Previous Stages

Citizen Engagement and Responses in Previous Stages

My Gov. Page: Smart city Shillong



3.3 Citizen Outreach

Consultation during revision (Jan – Feb 2017)

Understand the Needs & Aspirations of citizens

- Feedback through Online (Proposal was uploaded on 27th Jan 2017)
  - Mygov.in
  - SMB web site
  - Advertisement in FM Radio seeking feedback
- Stakeholders Meeting,18th January 2017
- Stakeholders Meeting,10th February 2017
- Meeting with Chieftain, Mr. Rickey Nelson Syiem, 3rd February 2017
- Meetings with PHE, MECL, SMB, DUA held Jan - Feb 2017
- Stakeholders Meeting,24th February 2017
- HPSC Meeting, 9th March 2017

Key Suggestions during revision stage

- Improvement of water supply, sanitation, drainage system and smart management in ABD Area
- **Renewal of Laitumkhrah Municipal Market**
- Address Traffic issues in ABD Area and suggest smart solutions
- Enhance River front Development to create more tourism and recreational assets in the city
- Create more tourism interest facilities
- Improvement of critical road intersections/junctions
- Encouraging off-street smart Parking
- Innovative smart pan city solutions

Citizen's Priorities

Basic infrastructure

- 24x7 water supply
- Drinking water facilities at Public Places
- Proper Maintenance of Strom water drains
- Provide Health Facilities

Tourism

- Water front Development
- Public Parks Development
- Infrastructure facilities at tourist places

Traffic and Transportation

- Road widening
- Good link roads
- Proper Parking Facilities
- Improve Public Transportation
- Pollution control framework for the city

Smart Communities

- Foot paths, Pathways, open spaces
- Solar street lighting
- Smart waste management
- Wifi zones
- Smart Public safety surveilling's

3.4 City Strategic Plan

CITY PROFILE

- State Capital of Meghalaya
- Educational and Tourism Centre for North-East India
- Capital of Rock Music in India
- Inadequate basic infrastructure in the city
- Traffic congestion in city core & main approach roads to the city.

SWOT

Strengths	Weaknesses	Opportunities	Threats
• Strong state govt. support • Well connected through NHs • Tourism capital of Meghalaya • Trade and commerce centre • Good climate and natural landscape	• Inadequate basic city infrastructure • City core highly congested. • Lacks business environment • Unorganized public transport • Urban sprawl	• Tourism development • Enhance city's clean image • Riverfront development • Recapture pedestrian friendly image of the hill town.	• Increasing number of privately run taxis and cars • Lack of coordination amongst urban local body and parastatals • Natural disaster Vulnerability in Seismic Zone V and Fires

CITIZEN ENGAGEMENT

- UGD, SWM, Adequate Water supply.
- City Transport Connectivity Improvement
- Tourism Facility Development
- Multilevel Car Parking in city core
- Security Improvement
- Use of Smart Technology for infrastructure

VISION

"Culturally and economically vibrant city of Meghalaya with focus on knowledge and tourism and to make it a clean, green, inclusive, modern, safe, citizen friendly and well governed city"

STRATEGIC FOCUS

SF1: Ensuring Clean, Green and Livable City
SF 2: Building a Smart Transportation System
SF 3: Ensuring Safe and Secure City
SF 4: Creating Enhanced Tourism and Recreation as Economic Base

STRATEGIC BLUEPRINT

SF-1
SB-1: Core Urban Services to Neighborhoods
SB-2: Green Urbanism and Solar Mission
SB-3: Retrofitting of Residential Area
SB-4: Environmental Watch

SF-2
SB-5: Public Transportation Improvement
SB-6: NMT, Pedestrian Friendly Roads and Parking
SB-7: Smart Mobility Management

SF-3
SB-8: Safe and Assured Electricity
SB-9: Smart Safety, Surveillance Monitoring

SF-4
SB-10: Development of Tourism Facilities
SB-11: Development of New Recreational/River Front Development
SB-13: Renewal of Iewduh (Bara Bazaar)

CHOICE OF ABD: CITY CENTRE

- Inadequate Basic Infrastructure
- Traffic Congestion & On-Street Parking
- Unsafe Pedestrian Environment
- Improve Tourism Facilities
- Umkhrah River as Urban Backyard
- Public Space Improvement
- Iewduh highly congested and unsafe market
- Visited/used by entire city

ABD THEMES

1	SM	Smart Urban Mobility
2	CG	Clean and Green Neighborhoods
3	EM	Environmental Monitoring
4	SCS	Smart City Shillong
5	TR	Tourism & Recreational Facilities
6	RI	Retrofitting of Bara Bazaar

CHOICE OF PAN CITY SOLUTIONS

- Municipal Governance
- Common Payment Platform
- Traffic Management
- Safety and Security

PAN CITY COMPONENTS

1	eM	E-Municipality
2	ICM	Integrated City Mobility Platform
3	IPP	Integrated Payment Platform

ABD PROJECTS

1. SM- SMART URBAN MOBILITY
SM 1- Pedestrianization and Retrofitting of Bazaar Streets
SM 2- Retrofitting of City Roads with NMT & Public Transport Priority
SM 3- Retrofitting/Improvement of Access Roads/Local Streets
SM 4- All Major Junctions Improvement
SM 5- New Public Transit Corridor
SM 6- Smart Multi Level Parking Complexes
2. CG- Clean and Green Liveable Neighborhoods
CG 1- Adequate Clean Water Supply
CG 2- Wastewater Collection
CG 3- Smart Solid Waste Management
CG 4- Storm Water Drainage
CG 5- Solar Mission
3. EM- Environmental Monitoring
EM 1- Umkhrah River Cleaning
EM 2- Rainwater Harvesting
EM 3- Tree Plantation
4. SCS- Smart Electricity and SCADA System
SCS 1- Intelligent City Safety, Transit services, Basic City Services
SCS 2- Safe and Assured Electricity
SCS 3- Fire Safety
SCS 4- Smart Water Meters
5. TR- Tourism and Recreational Facilities Development
TR 1- Tourism cum Cultural Centre (Through Adaptive Reuse of Old Assembly Complex)
TR 2- Umkhrah Riverfront Development and Lakefront Green
TR 3- Shillong Haat with Green Area/ Park
TR 4- Retrofitting of Park and Ward's Lake
6. RI- Renewal of Laitumkhrah Bazar and Retrofitting of Parking around Bara Bazar
RI 1- Renewal of Laitumkhrah Bara Bazar
RI 2- Existing Parking Building Improvement with addition of Smart Parking

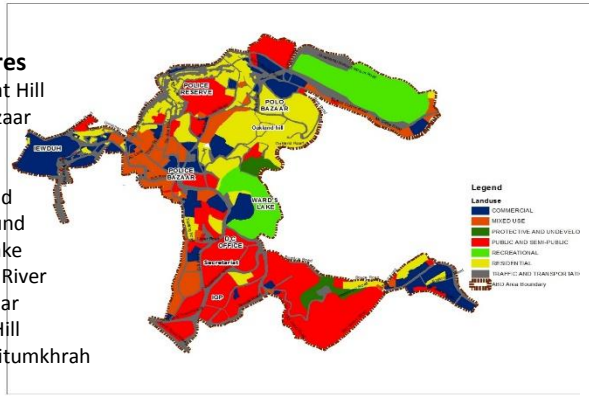
3.5 Delineation of ABD: City Centre and Secretariat Hill

1 **ABD is City Centre and CBD of Shillong with over 7,800 commercial establishments and 1,50,000 daily footfall for shopping, work, and recreational activities.**

2 **15,694 Residents living in ABD in neighborhoods and mixed use areas.**

ABD: 402 Acres

1. Secretariat Hill
2. Police Bazaar
3. Jail Road
4. G.S. Road
5. M. G. Road
6. Polo Ground
7. Ward's Lake
8. Umkhrah River
9. Bara Bazaar
10. Aukland Hill
11. Part of Laitumkhrah



Key Issues:

- **Traffic Congestion**
- **Un-organize on street Parking**
- **Bazaar congested and few sidewalks**
- **Inadequate Basic Infrastructure**
- **Umkhrah River as an Urban backyard**
- **Lacks Tourism Facilities and Image**
- **Bara Bazaar Congested, unsafe, and unhygienic Environment.**
- **Unsafe and lack of basic facility of Laitumkhrah market**

3 **Secretariat Hill, a hub of Govt. offices related to Capital and other state infrastructure agencies in ABD.**

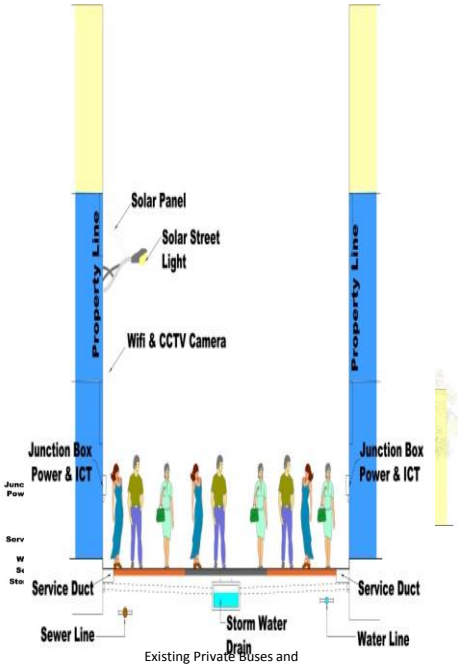
4 **City level Recreational and Sports Activities located over an area of 23.7 Ha in ABD.**

3.6 Smart Urban Mobility

SM-1 (10.5 Cr)	**Pedestrian Prioritization** and Retrofitting of 2.5 Km of Bazaar Streets
SM-2 (46.9 Cr)	**Retrofitting of 12.6 Km City Roads** with Sidewalks & UG Cabling in ABD
SM-3 (55.5 Cr)	Retrofitting of 18.5 Km of **Local Access Roads**
SM-4 (18 Cr)	Geometric Improvement of **12 Traffic Junctions**
SM-5 (12 Cr)	**1.2 Km New Public Transit Corridor** to streamline traffic congestion and One Way System
SM-6 (139 Cr)	**Smart Multi Level Parking** at 4 Strategic Locations (1465 Cars)

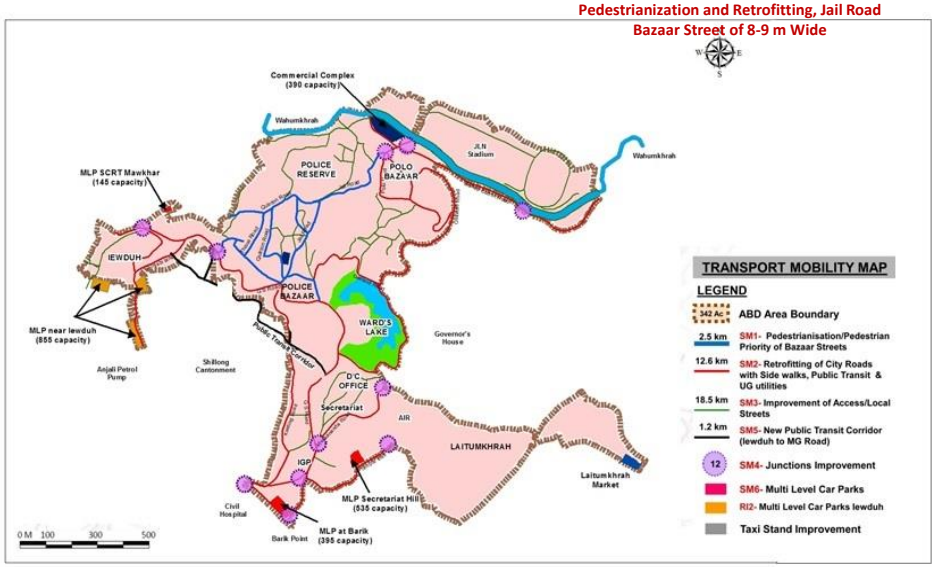
G. S. Road

Jail Road Bazaar



Existing Private Buses and Car Parking

Pedestrianization and Retrofitting, Jail Road Bazaar Street of 8-9 m Wide

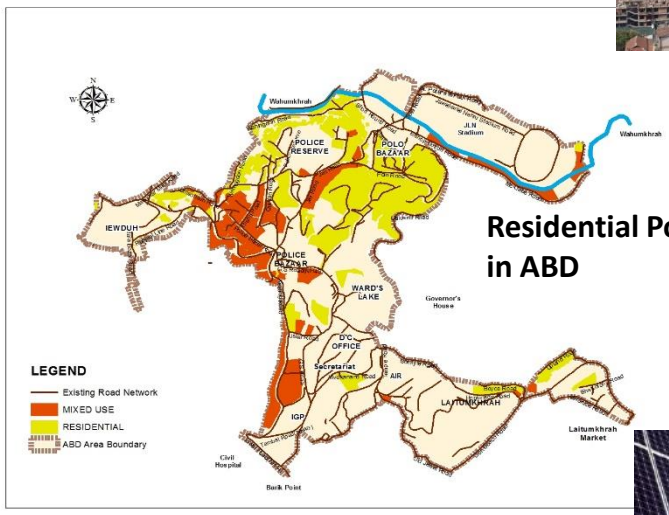


3.7 Clean and Green Livable Neighborhoods

100% Water Supply Connectivity (21.8 Cr):
100% Connections, Retrofitting 33 Km UG Water Supply Network, SCADA for Leak Detection

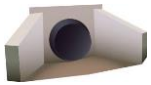
Existing basic infrastructure scenario

0% to 100% Coverage
7099 New Sewerage Connections (70.3 Cr)



Residential Population 17,494 in ABD

- **200 Smart Sensor Bins for SWM (11.9 Cr).**
- **2 Kit Bins for Segregation at**

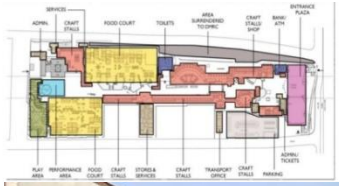


- **Retrofitting 21.8 Km Major Drains in ABD (16.4 Cr)**

Solar Mission (59.04 Cr):

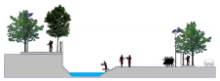
- **7.8 MW Rooftop Solar Power Generation**
- **1594 Solar Street and Park Lights**
- **1 No. Wastes to Energy Plant**
- **7099 Smart Meters**

3.8 Tourism and Recreational Facilities

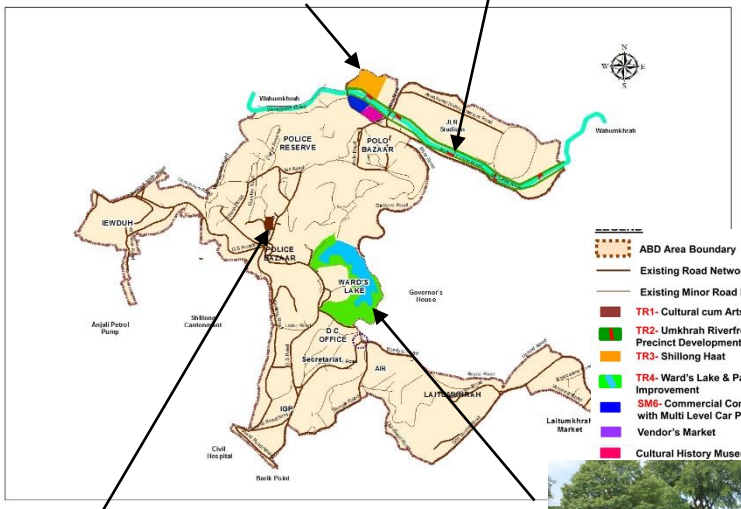


TR-3: Shillong Haat (1.5 Ha)

Shillong is a Tourism Gateway to Meghalaya. 0.725 Mn Tourism visit Meghalaya Annually



TR-2: Umkhrah Riverfront Development **(8 Cr)**



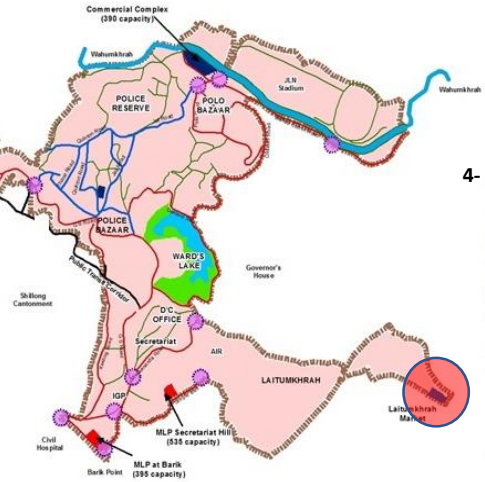
TR-1: Tourism cum Cultural Centre **(90 Cr)**
(Adaptive Reuse of Old MTC workshop)

TR-4: Retrofitting of Ward's Lake Park (8.5 Ha) **(4 Cr)**

3.9 Renewal of Laitumkhrah Market (Existing Situation)

- City Retail vegetable Market Place (1.23 acre)
- 92 Shops, Stall and 24 vendors
- Highly compact and congest environment
- Breakdown of basic services and lack of loading unloading space and parking
- Old unsafe Building

1-Vegetable Mkt cum Shopping Street



2- Poor drainage network along the corridor of the building

4- Wet and unclean floor

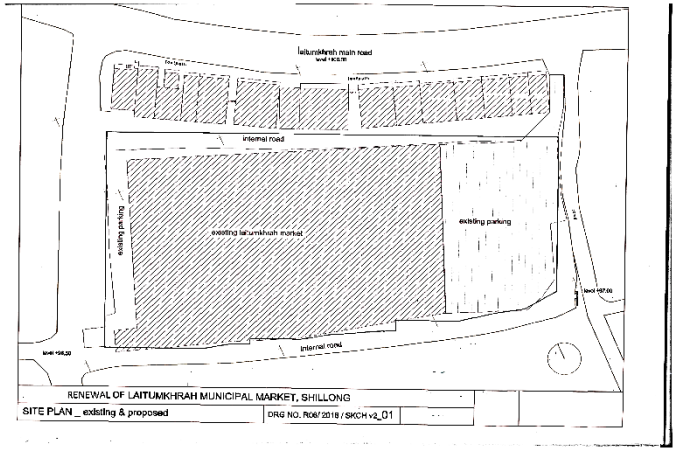
6-Inadequate Parking

7- No proper waste bin

3- Fish Market

5- Unsafe Structure

3.10 Renewal of Laitumkhrah Market & Retrofitting of parking around Bara Bazaar



Reclaim encroached street space and provide safety infrastructure

Key Strategy and Project Components:

Existing shops and stall owners along with vendors will be accommodated beside provision of high end branded stores and food courts will be made.
The project includes 121 green grocery and meat shops, 34 high end shops of 724 sqm, 7 restaurants of 228 sqm along with 2 food courts of 432 sqm, 100 cars space parking, loading and unloading space and garbage collection points.

Organized storage & loading unloading area.

RI-1: 92 Crores

Retrofitting of Market Streets and Open Spaces , loading & unloading space, new site infrastructure, Day Care facility, Utilities etc.

Retrofitting and Expansion of 3 MUDA Parking Complexes

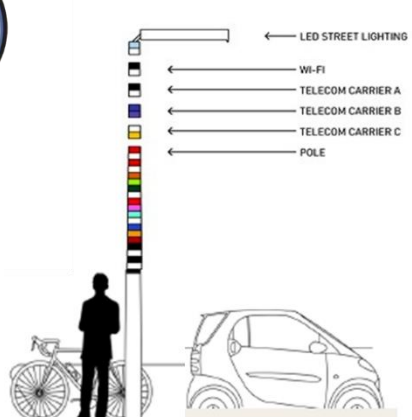
RI-2: 55 Crores

Retrofitting and Expansion of 3 Parking Blocks of MUDA with smart parking and

3.11 Smart City Shillong

SMART ELECTRIC METERS **13,200 NOS.**

WI-FI ENABLED ZONES 15.1 KMS.



SCS-2: Safe and Assured Electricity (37.8 Cr)

- UG Cabling
- Wire free Streets

SCS-3: Fire Safety (15 Cr)

- Water Storage Infrastructure
- Fire Hydrants (100 Nos.)

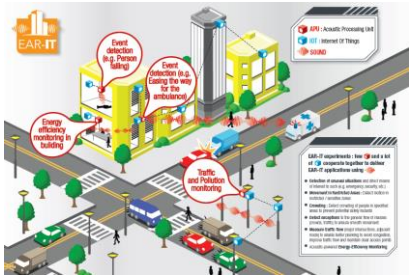
Fire Hydrants

SCS-4: Smart Meters (17.7 Cr)

- 7099 Smart Water Meters
- Smart Electricity Meters

200 No. Smart Bins

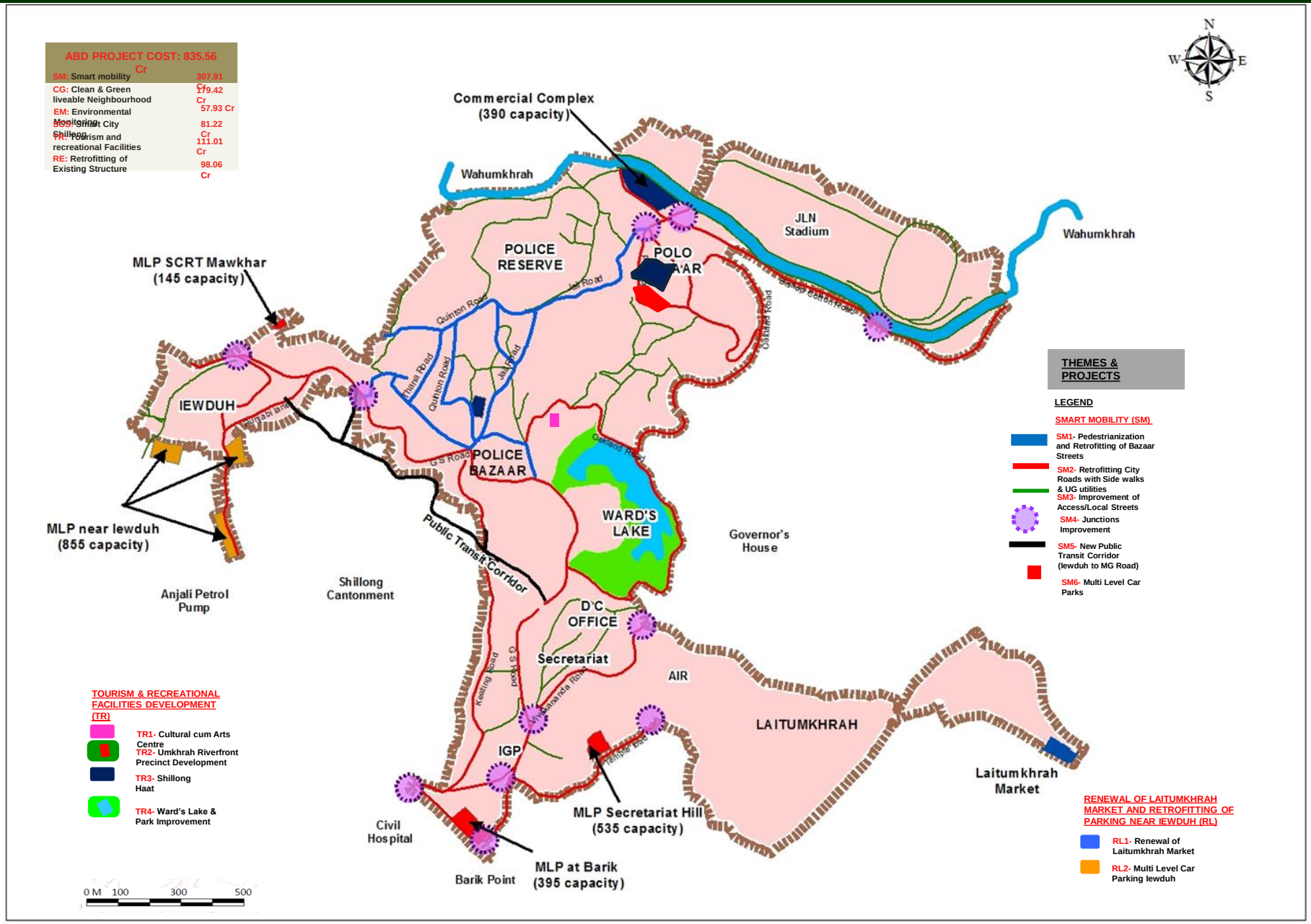
4 Nos. Smart Multilevel Parking (1465 Cars)



12 No. main street junction surveillance And monitoring

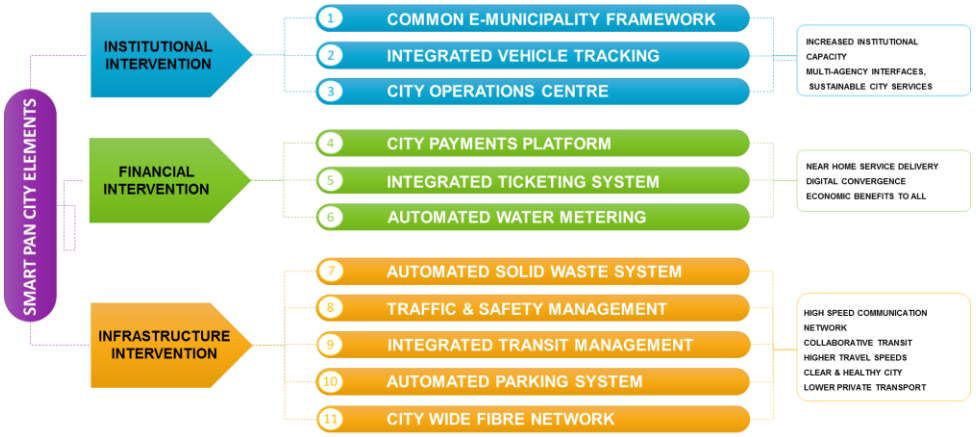
2.5 Km of Pedestrian Priority Bazaar Streets

3.12 ABD Themes and Projects

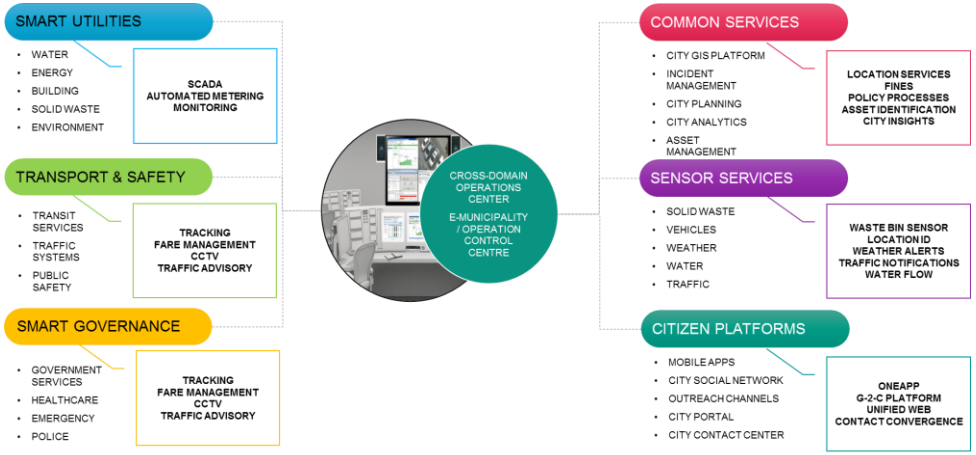


3.13 Pan City Proposal

Proposed ICT based Pan City Solutions

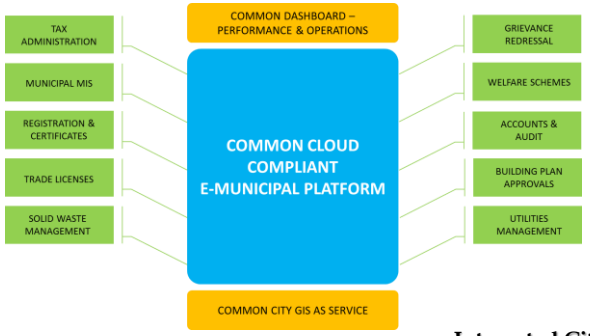


Integrated City Operations Platform



3.14 Pan City Proposal

E-Municipality, City Dashboard & GIS

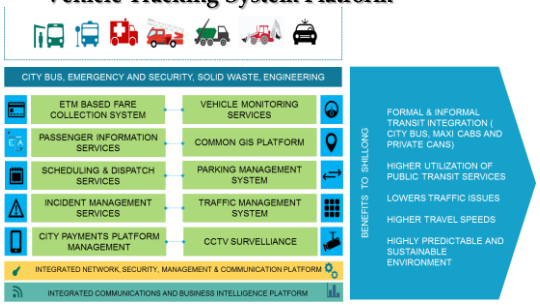


1	E Municipality	₹12 Cr
2	ITMS	₹10 Cr
3	Traffic Management	₹7 Cr
4	Parking Management	₹2 Cr
5	Solid Waste Management	₹5 Cr
6	City Payment System	₹10 Cr
7	Operational Control Centre	₹10 Cr
8	City Fibre Network	₹10 Cr

Total PAN City Proposals Cost ₹ **66 Cr**

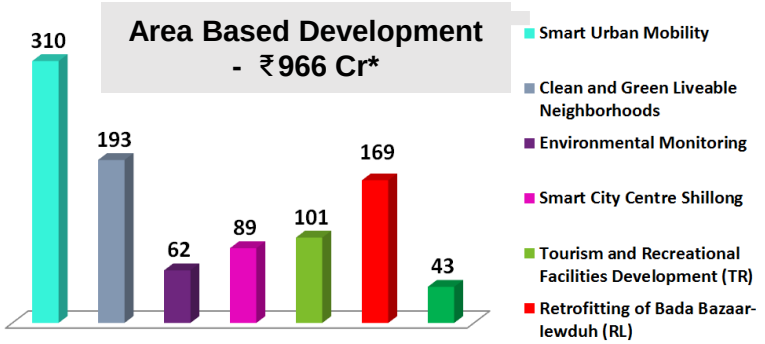
MOBILE APP TO FACILITATE MOBILE BASED SERVICE CONVERGENCE MAJOR THRUST AREAS TRANSIT INTEGRATION, CITY SERVICES, PAYMENTS AND TOURISM

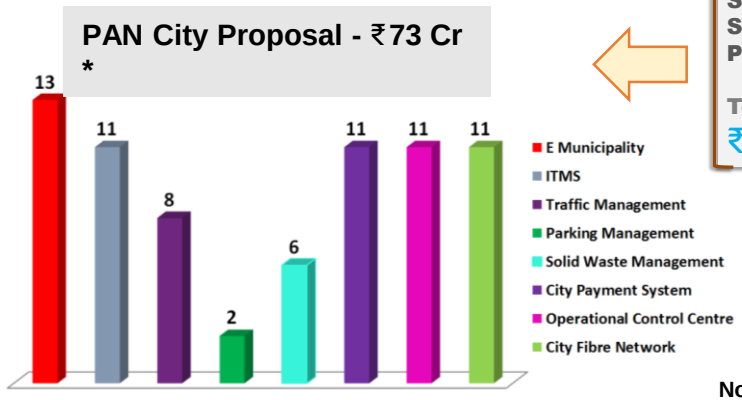
Integrated City Mobility and Vehicle Tracking System Platform



Integrated City Payments Platform

3.15 Financial Plan Abstract





Shillong Smart City Proposal

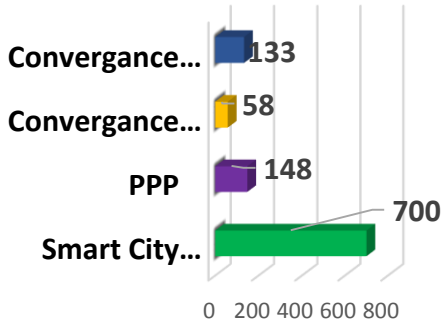
Total Project Cost

₹ 1039 CR*

Note:- * Escalated Cost

Means for Finance (₹ CR)

CAPITAL RECEIPT	Cost (₹ CR)
GOVERNMENT OF INDIA	350
GOVERNMENT OF MEGHALAYA	315
SHILLONG MUNICIPAL CORPORATION	35
TOTAL (a)	700
CONVERGENCE	
STATE GOVERNMENT	58
CENTRAL	133
PPP	148
TOTAL (b)	339
CAPITAL EXPENDITURE (a+b)	**1,039**



3.20 Public Private Partnership (PPP)

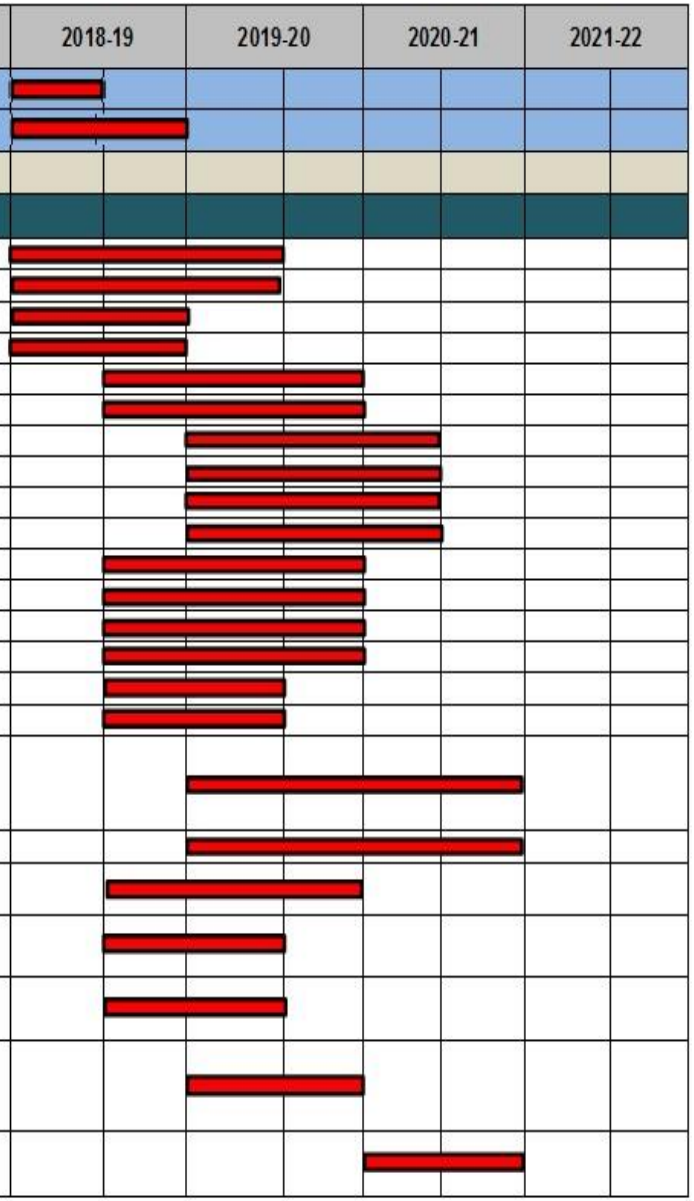
1	FINANCIAL ANALYSIS OF TOURISM CUM CULTURAL CENTRE (CITY CENTER) - PUBLIC PRIVATE PARTNERSHIP																		
	YEAR																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
INVESTMENT	-	-(43)	(22)	-		-														
O&M CHARGES				(2`91)	(3`06)	(3`21)	(3`37)	(3`54)	(3`72)	(3`90)	(4`10)	(4`30)	(4`52)	(4`74)	(4`98)	(5`23)	(5`49)	(5`76)	(6`05)	
REVENUE			-	12`30	12`92	13`56	14`24	14`95	15`70	16`48	17`31	18`17	19`08	20`04	21`04	22`09	23`19	24`35	25`57	
NET CASH FLOW	-	-(42`73)	(22`44)	9`39	9`86	10`35	10`87	11`41	11`98	12`58	13`21	13`87	14`57	15`29	16`06	16`86	17`71	18`59	19`52	
PROJECT IRR	15%																			

2	FINANCIAL ANALYSIS OF SHILLONG HAAT WITH GREEN AREA/ PARK - PUBLIC PRIVATE PARTNERSHIP																		
	YEAR																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
INVESTMENT	-	-	-(11)	(12)		-	-													
O&M CHARGES				-	(1`06)	(1`11)	(1`16)	(1`22)	(1`28)	(1`35)	(1`42)	(1`49)	(1`56)	(1`64)	(1`72)	(1`81)	(1`90)	(1`99)	(2`09)	
REVENUE					0`0	12`6	13`3	13`9	14`6	15`4	16`1	16`917`80	18`69	19`62	20`60	21`63	22`71	23`85	25`04	
NET CASH FLOW	-	-	-(10`98)	(11`53)	11`59	12`17	12`78	13`42	14`09	14`79	15`53	16`31	17`13	17`98	18`88	19`83	20`82	21`86	22`95	
PROJECT IRR	47%																			

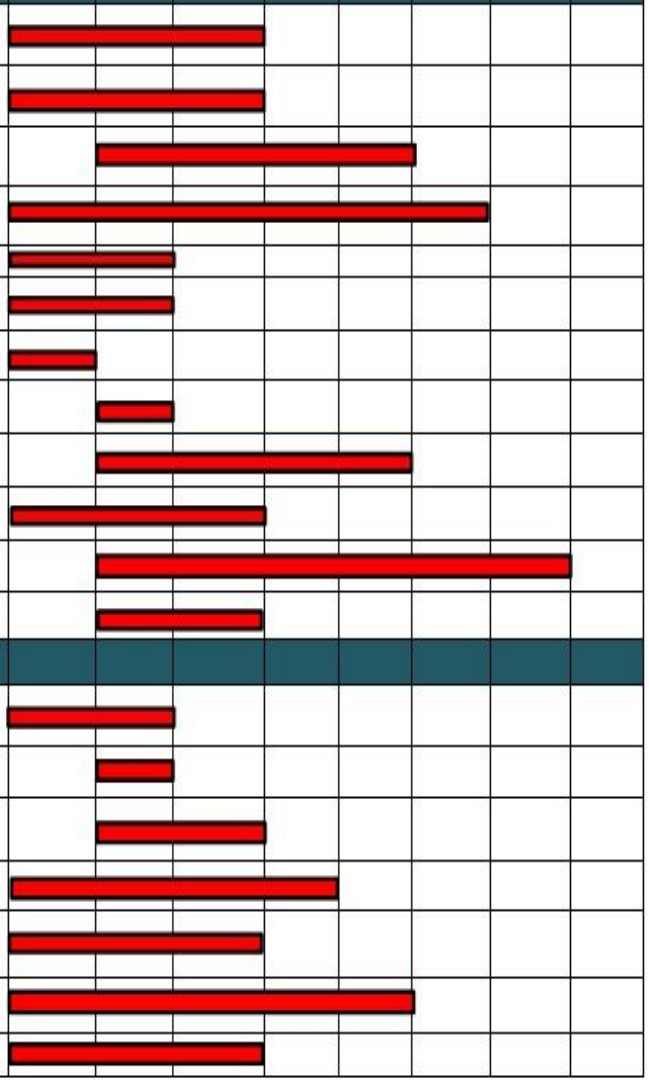
3	FINANCIAL ANALYSIS OF EXISTING PARKING BUILDING IMPROVEMENT AND ADDITION OF TWO MORE PARKING FLOORS (3 IN NUMBERS) - PUBLIC PRIVATE PARTNERSHIP																		
	YEAR																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
INVESTMENT	-	-(23)	(28)	(11)		-														
O&M CHARGES				(0`80)	(1`69)	(1`77)	(1`86)	(1`95)	(2`05)	(2`15)	(2`26)	(2`37)	(2`49)	(2`62)	(2`75)	(2`88)	(3`03)	(3`18)	(3`34)	
REVENUE			-	12`57	26`40	27`72	29`10	30`56	32`09	33`69	35`37	37`14	39`00	40`95	43`00	45`15	47`41	49`78	52`26	
NET CASH FLOW	-	-(22`97)	(28`45)	0`30	24`71	25`95	27`24	28`61	30`04	31`54	33`12	34`77	36`51	38`34	40`25	42`26	44`38	46`60	48`93	
PROJECT IRR	35%																			

3.21 Project Implementation Schedule

Sl. No	Themes / Projects / Projects	Description	2017-18	2018-19	2019-20	2020-21	2021-22
	Setting Up of SPV						
DP	DPR Preparation						
A	SHILLONG ABD Proposals						
1. SM	Smart Urban Mobility						
SM-1	Pedestrianization and Retrofitting of Bazaar Streets	SM1.1- Pedestrianization and Retrofitting of Police Bazaar lane					
		SM 1.2- Retrofitting of Jail Road Bazaar with pedestrian priority					
		SM 1.3- Retrofitting of Quniton Road with pedestrian priority					
		SM 1.4- Retrofitting of Thana Road with pedestrian priority					
SM-2	Retrofitting of City Roads with priority on Public Transport with Side walks and under ground utilities	SM 2.1- Keating Road					
		SM 2.2- GS Road					
		SM 2.3- Soso Tham Road					
		SM 2.4- MG Road					
		SM 2.5- Temple Road					
		SM 2.6- Vivekananda Road					
		SM 2.7- Camels Back Road					
		SM 2.8- Oakland Road					
		SM 2.9- Polo Road					
		SM 2.10- Bishop Cotton Road					
		SM 2.11- Bara Bazaar Road					
		SM 2.12- Punjabi Lane					
SM-3	Retrofitting/Improvement of Access Roads/Local Streets with under ground utilities	SM 3.1- All Access Roads/Local Streets in ABD					
SM-4	All Major Junctions Improvement	SM 4.1- All major Junctions improvement					
SM-5	New Public Transit Corridor	SM 5.1- Public Transit corridor from lewduh to MG Road (Excluding Land cost)					
SM-6	SM 6.1- Multi Level Park (MLP) at Secretariat Hill	Site area 0.55 ha (Total estimated car park 535)					
	SM 6.2- Multi Level Park (MLP) near Matphran Junction	Site area 0.15 ha (Total estimated car park 145)					
	SM 6.3- Multi Level Park (MLP) and Commercial Complex cum Art Gallery near Polo Junction	Site area 0.6 ha (Total estimated car park 390)					
	SM 6.4- Multi Level Park (MLP) near Police Bazaar	Site area 0.4 ha (Total estimated car park 395)					



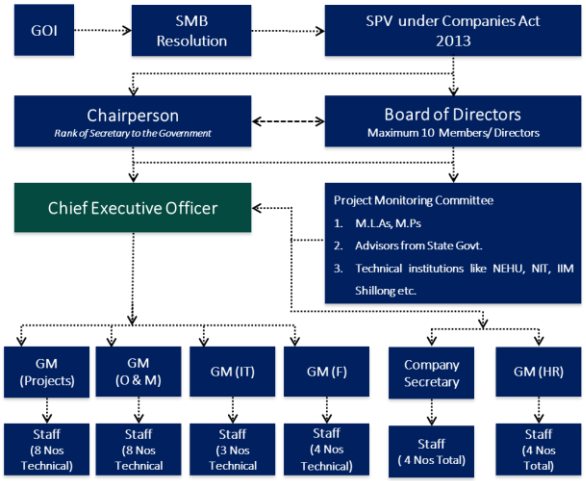
Sl. No	Themes / Projects / Projects	Description	2017-18	2018-19	2019-20	2020-21	2021-22
2. CG	Clean and Green Liveable Neighborhoods						
CG-1	Adequate Clean Water Supply	CG 1.1- 100% Water Supply Connections (New Connections to Remaining Existing HHs + Commecial connections)					
		CG 1.2- Retrofitting of Water Distribution Network main and distribution (Relocating Water Supply Network with New Pipes)					
CG-2	Wastewater Collection	CG 2.1- Achieving 100% Sewerage Connection Residential Area, Commercial area, PSP Area					
		CG 2.2- Undeground Sewerage System (Relaying/Retrofitting Sewerage Pipe underground in middle of the Street or as per design)					
CG-3	Smart Solid Waste Management (SWM)	CG 3.1- Smart SWM (Smart Sensor Bins)					
		CG 3.2- Provision of SWM Collection Bins (Providing 3 kit SWM Bins) and Collection tricycle and community storage bins					
		CG 3.3- Workshops, Citizen awareness programs etc					
		CG 3.4- Waste to energy plant from Municipal solid waste (Capacity 15 Tonn) (Biometheannation Plant plus Inciniration Plant)					
CG-4	Storm Water Drainage	CG 4.1- Retrofitting of Major Drains					
CG-5	Solar Mission	CG 5.1- Solar PV on rooftops of Public buildings (Installation of Solar PV on rooftop in all Govt and Instututional buildings)					
		CG 5.2- Solar System For Street Lights					
		CG 5.3- Solar Lights in Parks and Green Areas					
3. EM	Environmental Monitoring						
EM-1	Umkhrah River Cleaning	EM 1.1- STP Installation near JN Stadium (Area 1 ha)					
		EM 1.2- Water Quality Monitoring					
		EM 1.3- River Cleaning (Length 1.25 kms, average width 12 m)					
EM-2	Rainwater Harvesting	EM 2.1- Rain water Harvesting in Public Buildings					
		EM 2.2- Rain water Harvesting in Green/Open areas (around 50 acres of area)					
EM-3	Tree Plantation	EM 3.1- Along Public areas and streets (total length of 17.5 kms)					
		EM 3.2- Tree Plantation in Parks/Green Areas (5 acres)					



Sl. No	Themes / Projects / Projects	Description	2017-18	2018-19	2019-20	2020-21	2021-22
4. SCS	Smart City Shillong						
SCS-1	Intelligent City Safety, Transit services, Basic City Services	SCS-1.1 - SCDA platform for Water Supply, Sewage Control and Electricity complete with sensors, RTU, Flow, Pressure, over flow and Leak detection for real time monitoring					
SCS-2	Safe and Assured Electricity	SCS 2.1- Underground Electric Cabling (33 KV line)					
		SCS 2.2- Underground Electric Cabling (11 KV line)					
		SCS 2.3- Underground Electric Cabling (LT Lines)					
		SCS 2.4- Shifting and Beautification of Transformers (About 50 Locations)					
SCS-3	Fire Safety	Installation of Fire Hydrants and Water Storage Structures					
SCS-4	Smart Water Meters	Smart Water meters for residential, commercial and all.					
5. TR	Tourism and Recreational Facilities Development (TR)						
TR-1	TR1.1- Tourism cum Cultural Centre (Through Adaptive Reuse of Old Assembly Complex)	Site area 0.65 ha					
TR-2	TR 2.1- Umkhrah Riverfront Development and Lakefront Green	Site area 2.5 ha (Excluding river area)					
TR-3	TR 3.1- Shillong Haat with Green Area/ Park	Site area 1.5 ha					
TR-4	TR 4.1- Retrofitting of Park and Ward's Lake	Green area 8.5 ha					
6. RL	Renewal of Laitumkhrah Market and retrofitting of parking near Bara Baaar						
RI-1	Renewal of Laitumkhrah Market	Existing Builtup area 1.23 acre					
RI-2	Parking 1- Existing Parking Building Improvement and addition of two more parking floors for smart parking	Blocks area 0.2 ha (G+1 structure)- 285 Car Parks					
	Parking 2- Existing Parking Building Improvement and addition of two more parking floors for smart parking	Block area 0.25 ha (single storey structure)- 285 Car Parks					
	Parking 3- Existing Parking Building Improvement and addition of two more parking floors for smart parking	Block area 0.25 ha (single storey structure)- 285 Car Parks					

3.22 SPV Structure and Organogram

SPV Structure



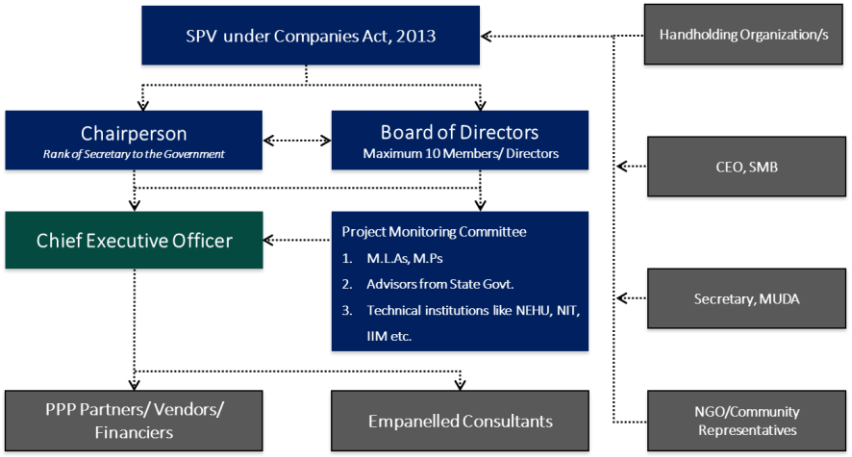
Board of Directors

1. Chairperson (Secretary to Government)
2. Chief Executive Officer

Directors

1. District Collector
2. Director, Urban Affairs
3. CEO, SMB
4. Secretary, MUDA
5. MD, MPDCL
6. Superintendent of Police
7. RM, MSRTC
8. CE, PWD
9. CE, PHED
10. NEC

SPV Organogram



FINANCIAL PLAN : ABSTRACT FOR AREA BASED DEVELOPMENT

	THEME , PROJECTS & SUB PROJECTS	NO. OF PROJECTS	TOTAL COST AT ESCALATED PRICES	EXPENDITURE - ESCALATED					FINANCING												O&M		REVENUE
									CONVERGENCE									PPP	SPV FINANCING	TOTAL	FIRST YEAR OF OPERATION	TOTAL FOR 10 YEARS	TOTAL FOR 10 YEARS
				YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	PWD NH DIV	PWD CENTRAL DIV	PPP	State Govt Dept	NORTH EAST COUNCIL	AMRUT	SBM	IPDS	IT	SCM				
1. SM	SMART URBAN MOBILITY	9	339.46	-	73.75	154.85	81.31	-	16.95	9.09	-	182.67	-	-	-	-	-	130.75	339.46	12.18	126.38	134.98
2. CG	CLEAN AND GREEN LIVEABLE NEIGHBORHOODS	5	194.47	-	96.74	63.80	32.40	-	16.55	-	-	-	15.00	70.31	11.86	-	-	80.75	194.47	11.86	123.35	132.13
3. EM	ENVIRONMENTAL MONITORING	3	62.22	-	33.06	29.12	0.04	-	-	-	-	-	-	-	-	-	-	62.22	62.22	1.89	21.58	-
4. SCS	SMART CITY CENTRE SHILLONG	4	88.50	-	37.12	35.05	16.33	-	-	-	-	-	-	-	-	50.00	1.44	37.06	88.50	8.99	87.26	-
5. SCS	TOURISM AND RECREATIONAL FACILITIES DEVELOPMENT (TR)	4	125.83	-	1.36	47.76	37.96	13.92	-	-	85.11	-	-	-	-	-	-	40.73	125.83	5.68	52.44	-
6. RI	RENEWAL OF LAITUMKHRAH MARKET AND RETROFITTING OF PARKING LOTS AT BARA BAZAAR-IEWDUH	2	112.89	-	-	56.22	63.36	49.23	-	-	62.89	-	-	-	-	-	-	50.00	112.89	2.08	26.71	50.39
	DPR COST		**42.70**	20.83	21.87	-	-	-	**0**									**42.70**	**42.70**			
	TOTAL AREA BASED DEVELOPMENT		**966.08**	**20.83**	**263.90**	**386.79**	**231.40**	**63.15**	**33.50**	**9.09**	**148.00**	**182.67**	**15.00**	**70.31**	**11.86**	**50.00**	**1.44**	**444.21**	**966.08**	**42.68**	**437.72**	**317.51**

B	SHILLONG PAN City Proposals	AT CONSTANT PRICES
	PAN CITY COMPONENTS	
PAN- 1	E Municipality	12
PAN- 2	ITMS	10
PAN- 3	Traffic Management	7
PAN- 4	Parking Management	2
PAN- 5	Solid Waste Management	5
PAN- 6	City Payment System	10
PAN- 7	Operational Control Centre	10
PAN- 8	City Fibre Network	10
	Total cost (unescaletd)	**66.00**
	Total cost (escaletd)	**72.86**

O&M AND REVENUES OF SPV				O&M	REVENUE (INR CRORES)- UNESCALATED							
THEME , PROJECTS & SUB PROJECTS		TOTAL COST AT ESCALATED PRICES	ANNUAL O&M COST (%)	ANNUAL O&M COST (UNESCALATED)	REVENUE 1	AMOUNT	REVENUE 2	AMOUNT	REVENUE 3	AMOUNT	TOTAL
1. SM	**Smart Urban Mobility**	**339.46**		**9.81**		**25.19**	**-**	**0.24**	**-**	**-**	**25.43**
SM-1 & 2	a. Pedestrianization and Retrofitting of Bazaar Streets b. Retrofitting of City Roads with Public Transport	60.78	4.10%	2.49							
SM-3 & 4	c. Retrofitting/Improvement of Access Roads/Local Streets d.All Major Junctions Improvement	82.99	4.10%	3.40							-
SM-5	New Public Transit Corridors	13.02	2.00%	0.26	25 bus stops, with 10 sq mt of advertisement area. 250 sq mt of advertisement area.	0.01					0.01
	SM 6.1- Multi Level Park (MLP) at secretariat Hill	47.83	2.00%	0.96	465 - CAR PARK @ 20Rs CHARGES AND commercial @70RS	7.57	ADVERTISEMENT CHARGES	0.07			7.65
	SM 6.2- Multi Level Park (MLP) near Matphran Junction	21.04	2.00%	0.42	102 - CAR PARK @ 20Rs CHARGES AND commercial @70RS	1.66	ADVERTISEMENT CHARGES	0.02			1.68
SM-6	SM 6.3- Multi Level Park (MLP) and Commercial Complex cum Art Gallery near Polo Junctic	75.00	2.00%	1.50	390 - CAR PARK @ 20Rs CHARGES AND commercial @70RS AND RENTAL FROM SHOPS	8.32	ADVERTISEMENT CHARGES	0.07			8.39
	SM 6.4- Multi Level Park (MLP) near Police Bazaar	38.80	2.00%	0.78	345- CAR PARK @ 20Rs CHARGES AND commercial @70RS	7.63	ADVERTISEMENT CHARGES	0.07			7.70
2. CG	**Clean and Green Liveable Neighborhoods**	**194.47**		**9.56**		**14.30**	**16.20**	**16,202.49**	**-**	**0.53**	**17.32**
CG-1	Adequate Clean Water Supply	23.35	6.00%	1.40	Connection charge		water charge	1.6			1.60
CG-2	Wastewater Collection	77.62	6.00%	4.66	Connection charge	8.10	75% of water charges	0.89	Sale price of treated water	0.53	9.52
CG-3	Smart SWM	12.45	6.00%	0.75							
CG-4	Storm Water Drainage	18.03	2.00%	0.36				16200			
CG-5	Solar Mission	63.02	3.80%	2.39	SALE OF SURPLUS OF POWER -	6.2	16.2				6.20
3. EM	**Environmental Monitoring**	**62.22**		**1.57**		**-**	**-**	**-**	**-**	**-**	**-**
EM-1	Umkhrah River Cleaning	5.33	8.00%	0.43	-						-
EM-2	Rain Water Harvesting	56.71	2.00%	1.13	-						-
EM-3	Tree Plantation	0.17	8.00%	0.01							-
4. SCS	**Smart City Centre Shillong**	**88.50**		**7.08**		**-**	**-**	**-**	**-**	**-**	**-**
SCS-1	Intelligent City Safety, Transit services, Basic City Services	9.98	8.00%	0.80							-
SCS-2	Safe and Assured Electricity	41.31	8.00%	3.30							-
SCS-3	Fire Safety	17.83	8.00%	1.43							-
SCS-4	Smart water meters	19.38	8.00%	1.55							-
5. SCS	**Tourism and Recreational Facilities Development (TR)**	**125.83**		**4.40**		**10.22**	**-**	**6.23**	**-**	**2.63**	**19.08**
SCS-1	TR 1.1- Tourism cum Cultural Centre (City Center)	90.00	3.50%	3.15	ENTRY FEES FROM VISITORS	5.110	REVENUE FROM COMMERCIAL COMPLEX AND ADVERTISEMENT	2.43	160 CAR PARKING @ 20rS	2.10	9.64
SCS-2	TR 2.1- Umkhrah Riverfront Development and Lakefront Green	9.09	3.50%	0.32							-
SCS-3	TR 3.1- Shillong Haat with Green Area/ Park	22.52	3.50%	0.79	ENTRY FEES FROM VISITORS	5.11	REVENUE FROM COMMERCIAL COMPLEX AND ADVERTISEMENT	3.8025	FEE FOR USE OF PUBLIC TOILETS	0.53	9.44
SCS-4	TR 4.1- Organized Green in 3rd Secreteriat Area	4.23	3.50%	0.15							-
				-							-
RI	**RENEWAL OF LAITUMKHRAH MARKET AND RETROFITTING OF PARKING LOTS AT BARA BAZAAR-IEWDUH**	**112.89**	**0.04**	**2.26**	**-**	**3.43**	**-**	**0.30**	**-**	**-**	**3.76**

O&M AND REVENUES OF SPV

THEME , PROJECTS & SUB PROJECTS		TOTAL COST AT ESCALATED PRICES	O&M ANNUAL O&M COST (%)	O&M ANNUAL O&M COST (UNESCALATED)	REVENUE (INR CRORES)- UNESCALATED REVENUE 1	AMOUNT	REVENUE 2	AMOUNT	REVENUE 3	AMOUNT	TOTAL
RL-1	Retrofitting of Laitumkhrah market	50.00	2.00%	1.00	REVENUE FROM RENT OF SHOPS	3.43	100 CAR PARKS @ 10Rs /hr	0.3			3.76
RI-2	Parking	62.89	2.00%	1.26							-
	DPR COSTS	42.70									
	TOTAL AREA BASED DEVELOPMENT	**966.08**	**0.04**	**34.69**	**-**	**53.14**	**16.20**	**16,209.26**	**-**	**3.15**	**65.58**
	PAN CITY PROJECT COST TOTAL	72.86	8%	5.83							
	TOTAL PAN CITY DEVELOPMENT	**72.86**		**5.83**							-
	GRAND TOTAL	**1,039**		**40.11**							**81.46**

FINANCIAL PLAN : ABSTRACT FOR AREA BASED DEVELOPMENT

THEME , PROJECTS & SUB PROJECTS		NO. OF	TOTAL	TOTAL COST AT ESCALATED PRICES	EXPENDITURE - ESCALATED					FINANCING													O&M		REVENUE
										CONVERGENCE								PPP	SPV FINANCING						
					YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	PWD NH DIV	PWD CENTRAL DIV	PPP	State Govt Dept	NORTH EAST COUNCIL	AMRUT	SBM	IPDS	IT	LOAN BORROWING BY SPV	BOND ISSUE BY SPV	SCM	TOTAL	FIRST YEAR OF OPERATION	TOTAL FOR 10 YEARS	TOTAL FOR 10 YEARS
1. SM	**SMART URBAN MOBILITY**		**307.91**	**339.46**	**-**	**77.65**	**180.50**	**81.31**	**-**	**16.95**	**9.09**	**-**	**182.67**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**130.75**	**339.46**	**12.18**	**126.38**	**134.98**
SM-1	Pedestrianization and Retrofitting of Bazaar Streets		10.55	11.26	-	7.39	3.88	-	-	-											11.26	**11.26**			
SM-2	Retrofitting of City Roads with Public Transport		46.38	49.51	-	32.47	17.05	-	-	-											49.51	**49.51**	3.03	33.40	
SM-3	Retrofitting/Improvement of Access Roads/Local Streets		55.44	62.65	-	-	30.56	32.09	-	16.95	-	-	-	-	-	-	-	-			45.70	**62.65**			
SM-4	All Major Junctions Improvement		18.00	20.34	-	-	9.92	10.42	-	-	9.09	-	-	-	-	-	-	-			11.26	**20.34**	4.34	41.47	
SM-5	New Public Transit Corridors		12.00	13.02	-	4.20	8.82	-	-	-	-	-	-	-	-	-	-	-			13.02	**13.02**	0.32	3.49	
	SM 6.1- Multi Level Park (MLP) at secretariat Hill		44.44	47.83	-	23.33	24.50	-	-	-	-		47.83	-	-	-	-	-			-	**47.83**	1.16	12.82	
SM-6	SM 6.2- Multi Level Park (MLP) near Matphran Junction		19.55	21.04	-	10.26	10.78	-	-	-	-		21.04	-	-	-	-	-			-	**21.04**	0.51	5.64	22.51
	SM 6.3- Multi Level Park (MLP) and Commercial Complex cum Art Gallery near Polo Junction		68.03	75.00	-	-	75.00	-	-	-	-		75.00	-	-	-	-	-			-	**75.00**	1.82	20.10	112.46
	SM 6.4- Multi Level Park (MLP) near Police Bazaar		33.52	38.80	-	-	-	38.80	-	-	-		38.80	-	-	-	-	-			-	**38.80**	0.99	9.46	
2. CG	**CLEAN AND GREEN LIVEABLE NEIGHBORHOODS**		**179.42**	**194.47**	**-**	**97.74**	**64.32**	**32.40**	**-**	**16.55**	**-**	**-**	**-**	**15.00**	**70.31**	**11.86**	**-**	**-**	**-**	**-**	**80.75**	**194.47**	**11.86**	**123.35**	**132.13**
CG-1	Adequate Clean Water Supply		21.88	23.35	-	15.31	8.04	-	-	-	-	-	-	15.00	-	-	-	-			8.35	**23.35**	1.7	18.8	21.40
CG-2	Wastewater Collection		70.31	77.62	-	24.36	25.58	27.67	-	-	-	-	-	-	70.31	-	-	-			7.31	**77.62**	5.9	56.8	27.64
CG-3	Smart SWM		11.86	12.45	-	12.45	-	-	-	-	-	-	-	-	-	11.86	-	-			0.59	**12.45**	0.9	10.9	-
CG-4	Storm Water Drainage		16.34	18.03	-	4.29	9.01	4.73	-	16.55	-	-	-	-		-	-	-			1.48	**18.03**	0.4	4.8	-
CG-5	Solar Mission		59.04	63.02	-	41.32	21.70	-	-	-	-	-	-	-	-		-	-			63.02	**63.02**	2.9	32.1	83.10
3. EM	**ENVIRONMENTAL MONITORING**		**57.93**	**62.22**	**-**	**33.06**	**29.12**	**0.04**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**62.22**	**62.22**	**1.89**	**21.58**	**-**
EM-1	Umkhrah River Cleaning		5.08	5.33	-	5.33	-	-	-	-	-	-	-	-	-	-	-	-			5.33	**5.33**	0.49	6.21	
EM-2	Rain Water Harvesting		52.69	56.71	-	27.66	29.05	-	-	-	-	-	-	-	-	-	-	-			56.71	**56.71**	1.38	15.20	
EM-3	Tree Plantation		0.16	0.17	-	0.07	0.07	0.04	-	-	-	-	-	-	-	-	-	-			0.17	**0.17**	0.02	0.17	
4. SCS	**SMART CITY CENTRE SHILLONG**		**81.22**	**88.50**	**-**	**36.73**	**35.13**	**16.64**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**50.00**	**1.44**	**-**	**-**	**37.06**	**88.50**	**8.99**	**87.26**	**-**
SCS-1	Intelligent City Safety, Transit services, Basic City Services		9.35	9.98	-	6.55	3.44	-	-	-	-	-	-	-	-	-	-	-			9.98	**9.98**	0.97	10.70	
SCS-2	Safe and Assured Electricity		37.81	41.31	-	15.88	16.67	8.75	-	-	-	-	-	-	-	-	34.03	-			7.28	**41.31**	4.22	40.28	
SCS-3	Fire Safety		16.32	17.83	-	6.85	7.20	3.78	-	-	-	-	-	-	-	-	-	1.44			16.39	**17.83**	1.82	17.38	
SCS-4	Smart water meters		17.74	19.38	-	7.45	7.82	4.11	-	-	-	-	-	-	-	-	15.97	-			3.42	**19.38**	1.98	18.90	
5. SCS	**TOURISM AND RECREATIONAL FACILITIES DEVELOPMENT (TR)**		**111.01**	**125.83**	**-**	**1.36**	**64.04**	**46.51**	**13.92**	**-**	**-**	**85.11**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**40.73**	**125.83**	**5.68**	**52.44**	**-**
SCS-1	TR 1.1- Tourism cum Cultural Centre (City Center)		80.29	90.00	-	-	59.01	30.98	-	-	-	62.59	-	-	-	-	-	-			27.41	**90.00**	4.02	38.39	
SCS-2	TR 2.1- Umkhrah Riverfront Development and Lakefront Green		7.85	9.09	-	-	2.16	4.54	2.38	-	-	-	-	-	-	-	-	-			9.09	**9.09**	0.43	3.47	
SCS-3	TR 3.1- Shillong Haat with Green Area/ Park		18.98	22.52	-	-	-	10.98	11.53	-	-	22.52	-	-	-	-	-	-			-	**22.52**	1.06	8.60	
SCS-4	TR 4.1- Organized Green in 3rd Secreteriat Area		3.90	4.23	-	1.36	2.86	-	-	-	-	-	-	-	-	-	-	-			4.23	**4.23**	0.18	1.98	
6. RI	**RENEWAL OF LAITUMKHRAH MARKET AND RETROFITTING OF PARKING LOTS AT BARA**		**97.99**	**112.89**	**-**	**-**	**38.67**	**44.93**	**29.30**	**-**	**-**	**62.89**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**50.00**	**112.89**	**2.08**	**26.71**	**50.39**
RI-1	**RENEWAL OF LAITUMKHRAH MARKET**		43.14	50.00	-	-	15.70	16.48	17.83	-	-	-	-	-	-	-	-	-			50.0	**50.00**	1.28	12.19	50.39
RI-2	**RETROFITTING OF PARKING LOTS AT BARA BAZAAR-IEWDUH**		54.85	62.89	-	-	22.97	28.45	11.47	-	-	62.89	-	-	-	-	-	-	-	-	-	62.89	0.80	14.53	
	DPR COST		**41.66**	**42.70**	20.83	21.87	-	-	-												**42.7**	**42.70**			
TOTAL AREA BASED DEVELOPMENT (1. 2. 3. 4. 5. 6.)			**877.15**	**966.08**	**20.83**	**268.42**	**411.79**	**221.83**	**43.22**	**33.50**	**9.09**	**148.00**	**182.67**	**15.00**	**70.31**	**11.86**	**50.00**	**1.44**	**-**	**-**	**444.21**	**966.08**	**42.68**	**437.72**	**317.51**
			874.86	**966.09**	**21**	**264**	**387**	**231**	**63**	**33.50**	**9.09**	**304**	**-**	**15.0**	**70**	**12**	**50.0**	**1.44**	**-**	**-**	**471**	**966.1**	**8.70**	**341.17**	**264.42**

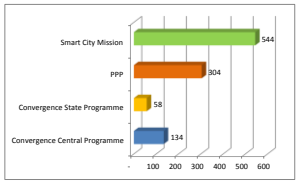
36.40

833.20

					33.50	9.09	303.71
	251.34	350.84	199.90	51.95			
20.83	263.902261	386.800066	231.4052939	63.15086753			

Convergence Ce	134
Convergence St	58
PPP	304
Smart City Missi	544

1,037.51



			CONVERGENCE		PPP	SPV FINANCING	
			AMRUT	SBM			
1. SM	Smart Urban Mobility					131	
		SM 6.1- Multi Level Park (MLP) at secretari			48		
		SM 6.2- Multi Level Park (MLP) near			13		
		SM 6.3- Multi Level Park (MLP) and Commercial Complex cum			53		
		SM 6.4- Multi Level Park (MLP)			39		
2. CG	Clean and Green Liveable Neighborhoods					79	
		Wastewater Collec	-				
		Smart SWM		-			
		Solar mission			-		
3. EM	Environmental Monitoring					62	
4. SCS	Smart City Centre Shillong					37	
5. TR	Tourism and Recreational Facilities Development (TR)					13	
		TR 1.1- Tourism cum Cultural Centre /Citv			65		
		TR 3.1- Shillong Haat with Green			23		
6. RL	Redevlopment of Bada Bazaar-Lewduh (RL)					106	
		Retrofitting and Parking DPR Preparation cost			63		
						43	
			-	-	304	471	
		TOTAL	86		304	471	861
					303.71	471.18	

CASH FLOW STATEMENT FOR SPECIAL PURPOSE VEHICLE, SHILLONG

	CONVERGENCE		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	TOTAL
CAPITAL CONTRIBUTION AND SMART CITY GRANT			35.00	350.00	315.00	-	-	-	-	-	-	-	-	-	700.00
GOVERNMENT OF INDIA		50%	35.00	175.00	140.00										350.00
GOVERNMENT OF MEGHALAYA		45%		157.50	157.50										315.00
SHILLONG MUNICIPAL CORPORATION		5%		17.50	17.50										35.00
															-
CONVERGENCE FUNDING			-	211.37	211.92	87.05	11.53	-	-	-	-	-	-	-	521.87
SMART URBAN MOBILITY	PWD NH		-	16.95											16.95
SMART URBAN MOBILITY	PWD CENTRAL		-		9.09										9.09
SMART URBAN MOBILITY	STATE GOVT. DEPT		-	33.59	110.28	38.80									182.67
SMART URBAN MOBILITY	PPP		-												-
CLEAN AND GREEN LIVEABLE NEIGHBOURHOODS	PWD NH			4.29	9.01	3.25									16.55
CLEAN AND GREEN LIVEABLE NEIGHBOURHOODS	AMRUT		-	24.36	25.58	20.37									70.31
CLEAN AND GREEN LIVEABLE NEIGHBOURHOODS	SBM		-	11.86											11.86
CLEAN AND GREEN LIVEABLE NEIGHBOURHOODS	NORTH EAST COUNCIL			15.00											15.00
SMART CITY CENTRE	IPDS			23.33	24.50	2.17									50.00
SMART CITY CENTRE	IT DEPT				1.44										1.44
TOURISM AND RECREATIONAL FACILITIES DEVELOPMENT	PPP		-	59.01	3.58	10.98	11.53								85.11
RENEWAL OF LAITUMKHRAH MARKET AND RETROFITTING OF PARKING LOTS AT BARA BAZAAR-IEWDUH	PPP		-	22.97	28.45	11.47									62.89
OPERATING REVENUES															
SMART URBAN MOBILITY					-	12.241	12.853	13.496	14.171	14.879	15.623	16.404	17.224	18.086	134.98
CLEAN AND GREEN LIVEABLE NEIGHBOURHOODS					-	9.48	22.10	12.35	12.97	13.62	14.30	15.01	15.76	16.55	132.13
ENVIRONMENTAL MONITORING					-	-	-	-	-	-	-	-	-	-	-
SMART CITY SHILLONG					-	-	-	-	-	-	-	-	-	-	-
TOURISM AND RECREATIONAL FACILITIES DEVELOPMENT					-	-	-	-	-	-	-	-	-	-	-
RENEWAL OF LAITUMKHRAH MARKET AND RETROFITTING OF PARKING LOTS AT BARA BAZAAR-IEWDUH					-	4.57	4.80	5.04	5.29	5.56	5.83	6.12	6.43	6.75	50.39
PAN CITY INITIATIVE					-	-	-	-	-	-	-	-	-	-	-
INCREMENTAL PROPERTY TAX INCOME			13	13	16.00	16.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	210.00
INCREMENTAL DEVELOPMENT FEES					8	8	8	8	8	8	8	8	8	8	80.00
TOTAL REVENUE			**13.00**	**13.00**	**24.00**	**50.29**	**66.75**	**57.89**	**59.43**	**61.05**	**62.75**	**64.54**	**66.42**	**68.39**	**607.51**
TOTAL INFLOW			**48.00**	**574.37**	**550.92**	**137.34**	**78.28**	**57.89**	**59.43**	**61.05**	**62.75**	**64.54**	**66.42**	**68.39**	**1,829.38**
CAPITAL EXPENDITURE															
AREA BASED DEVELOPMENT															
SMART URBAN MOBILITY		309.91	-	77.65	180.50	81.31	-								339.46
CLEAN AND GREEN LIVEABLE NEIGHBOURHOODS		192.94	-	97.74	64.32	32.40	-								194.47
ENVIRONMENTAL MONITORING		62.22	-	33.06	29.12	0.04	-								62.22
SMART CITY SHILLONG		88.50	-	36.73	35.13	16.64	-								88.50
TOURISM AND RECREATIONAL FACILITIES DEVELOPMENT		101.00	-	1.36	64.04	46.51	13.92								125.83
RENEWAL OF LAITUMKHRAH MARKET AND RETROFITTING OF PARKING LOTS AT BARA BAZAAR-IEWDUH		168.81	-	-	38.67	44.93	29.30								112.90
															-
PAN CITY INITIATIVE		72.86	-	22.87	24.01	25.98	-								72.86
DPR COSTS		42.70	20.83	21.87	-	-									42.70
TOTAL CAPITAL EXPENDITURE		**1,038.94**	**20.83**	**291.29**	**435.80**	**247.80**	**43.22**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,038.94**
OPERATION AND MAINTENANCE EXPENDITURE															
SMART URBAN MOBILITY					-	6.84	12.52	13.14	13.80	14.49	15.22	15.98	16.78	17.61	126.38
CLEAN AND GREEN LIVEABLE NEIGHBOURHOODS					0.86	5.96	12.20	12.81	13.45	14.13	14.83	15.57	16.35	17.17	123.35
ENVIRONMENTAL MONITORING					0.49	1.90	2.01	2.11	2.22	2.33	2.44	2.56	2.69	2.83	21.58
SMART CITY SHILLONG					-	0.97	9.04	9.49	9.96	10.46	10.98	11.53	12.11	12.71	87.26
TOURISM AND RECREATIONAL FACILITIES DEVELOPMENT					-	0.18	4.21	5.90	6.20	6.51	6.83	7.17	7.53	7.91	52.44

CASH FLOW STATEMENT FOR SPECIAL PURPOSE VEHICLE, SHILLONG													
	CONVERGENCE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	TOTAL
RENEWAL OF LAITUMKHRAH MARKET AND RETROFITTING OF PARKING LOTS AT BARA BAZAAR-IEWDUH				-	-	2.08	3.03	3.18	3.34	3.50	3.68	3.86	4.05	26.71
PAN CITY INITIATIVE				-	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	45.00
TOTAL OPERATING EXPENDITURE				**1.36**	**16.85**	**44.05**	**49.48**	**52.81**	**56.25**	**59.81**	**63.50**	**67.32**	**71.29**	**482.72**
TOTAL OUTFLOW		**20.83**	**291.29**	**437.16**	**264.66**	**87.27**	**49.48**	**52.81**	**56.25**	**59.81**	**63.50**	**67.32**	**71.29**	**1,521.66**
OPENING BALANCE OF CASH		0	27.17	310.25	424.02	296.70	287.71	296.11	302.73	307.54	310.48	311.52	310.62	
CASH SURPLUS/(DEFICIT)		27.17	283.08	113.76	(127.32)	(8.99)	8.40	6.62	4.80	2.94	1.04	(0.91)	(2.90)	
CLOSING BALANCE OF CASH		27.17	310.25	424.02	296.70	287.71	296.11	302.73	307.54	310.48	311.52	310.62	307.72	

307.72

ANNEXURE 4.03

GOVERNMENT OF MEGHALAYA
URBAN AFFAIRS DEPARTMENT

No. UAU.59/2015/258 Dated: Shillong, the 29th May, 2018

RESOLUTION OF SETTING UP OF SPECIAL PURPOSE VEHICLE FOR SMART CITY PLAN, SHILLONG CITY

The Government of India has launched an ambitious "Smart Cities Mission" to promote cities that provide core infrastructure and a good quality of life to its citizens, a clean and sustained environment with the application of "Smart Solutions". The Government of India has identified, Shillong City as one of the cities to participate for the Smart City Challenge.

LEA Associates Pvt Ltd has been appointed as consultant through a tender process and they have prepared the Upgraded Smart City Proposal. The proposal has been presented to the various Stakeholders for consultation and views .

The proposals has been presented to the State Level High Powered Steering Committee (SLHPSC) headed by the Chief Secretary, Govt. of Meghalaya. All suggestions and instructions given therein have been incorporated

The implementation of the Mission at the City level will be done by a Special Purpose Vehicle (SPV) created for the purpose as per point No. (iii) of the recommendation of the State Level High Powered Steering Committee (SLHPSC) in its meeting held on the 14th December, 2015 . The SPV will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart City development projects. Each Smart City will have a SPV which will be headed by a full time CEO and have nominees of Central Government, State Government and ULB on its Board. After selection of the city, the process of implementation will start with the setting up of the SPV.

As part of the Smart City Plan, the Urban Affairs Department on approval of the State Government hereby resolves for setting up of the Special Purpose Vehicle (SPV).

Joint Secretary to the Govt. of Meghalaya,
Urban Affairs Department

GOVERNMENT OF MEGHALAYA
URBAN AFFAIRS DEPARTMENT

No. UAU.59/2015/259 Dated: Shillong, the 29th May, 2018

RESOLUTION OF SETTING UP OF SPV HUMAN RESOURCE PLAN FOR SMART CITY PLAN, SHILLONG CITY

The Government of India has launched an ambitious "Smart Cities Mission" to promote cities that provide core infrastructure and a good quality of life to its citizens, a clean and sustained environment with the application of "Smart Solutions". The Government of India has identified, Shillong City as one of the cities to participate for the Smart City Challenge.

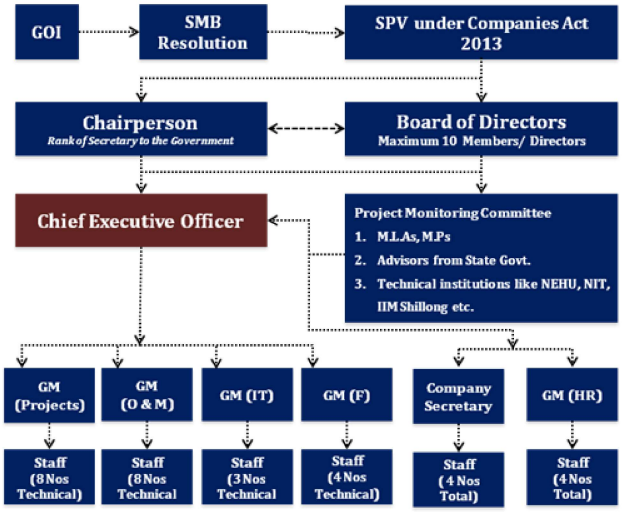
LEA Associates Pvt Ltd has been appointed as consultant through a tender process and they have prepared the Upgraded Smart City Proposal. The proposal has been presented to the various Stakeholders for consultation and views .

The proposals has been presented to the State Level High Powered Steering Committee (SLHPSC) headed by the Chief Secretary, Govt. of Meghalaya. All suggestions and instructions given therein have been incorporated

The implementation of the Mission at the City level will be done by a Special Purpose Vehicle (SPV) created for the purpose. The SPV will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart City development projects. Each Smart City will have a SPV which will be headed by a full time CEO and have nominees of Central Government, State Government and ULB on its Board. After selection of the city, the process of implementation will start with the setting up of the SPV.

For the purpose of establishment of Special Purpose Vehicle (SPV) a preliminary Human Resource Plan have been prepared which is as follows.

SPV Structure



Board of Directors
1. Chairperson (Secretary to Government)
2. Chief Executive Officer

Directors
1. District Collector
2. Director, Urban Affairs
3. CEO, SMB
4. Secretary, MUDA
5. MD, MPDCL
6. Superintendent of Police
7. RM, MSRTC
8. CE, PWD
9. CE, PHED
10. NEC

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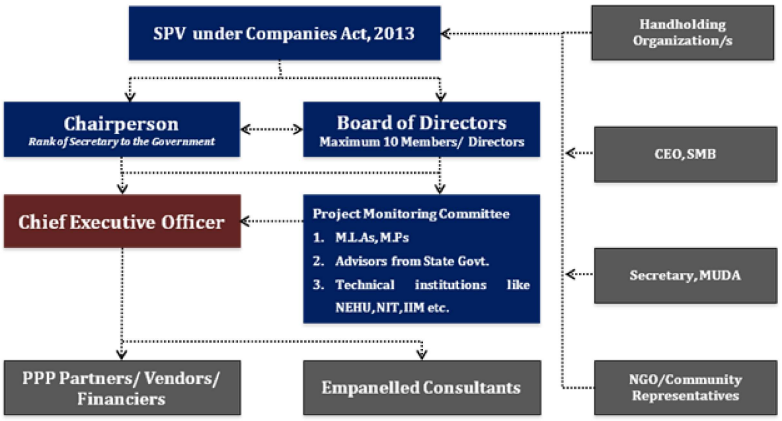
SPV Organogram



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The Urban Affairs Department on approval of the State Government hereby resolves the setting up of the Special Purpose Vehicle (SPV) as mentioned above.

Joint Secretary to the Govt. of Meghalaya,
Urban Affairs Department