	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.	SCENARIO 3	> HubliDharwadOne platform for citizen services. > 2.2 lakh responses were received during the first round citizen engagement > The second round of citizen engagement derived a total 1.66 lakh votes. > Multiple channels for citizen engagement were explored for the preparation of the Smart City Plan > 75 ward level meetings in a year.	> The city would strengthen on the platform it created for the Smart City Citizen engagement. It would continue the citizen engagement for its future projects and make the citizens active participants in the development of their city. > More services shall be included under the existing HubliDharwad One platform and the city shall strive to bring more citizens to participate in the process.	Creation of a centralized people empowerment platform for immediate connect with the masses which be an ICT intervention for real time,dynamic flow of feedback into the system and simultaneous sharing with all the governmental and non-governmental agencies along with the citizens as well.
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.	There are few architectural monuments, symbols, and festivals that emphasise the unique character of the city. Built, natural and cultural heritage is not preserved and utilised or enhanced through physical, management and policy structures.	Historic and cultural resources are preserved and utilised to some extent but limited resources exist to manage and maintain the immediate surroundings of the heritage monuments. New buildinds and areas are created without much thought to how they reflect the identity and culture of hte city.	Historic and cultural heritage resources are preserved and utilised and their surroundings are well-maintained. Public spaces, public buildings and amenities reflect the cultural identity of the city.	Built, natural and intangible heritage are preserved and utilised as anchors of the city. Historical and cultural resources are enahnced through various mediums of expression. Public spaces, open spaces, amenities and public buildings reflect local identity and are widely used by the public through festivals, events and activities.	SCENARIO 1	> Hubballi Dharwad has the highest number of Gnanapeeth Awardees in the country and National level classical musicians hail from this city. > Hubballi Dharawad has always been a centre of learning , with Karnataka University and several educational institutions established here. > HDMC owns town halls around the city, these places are rented out for cultural programmes which promote its legacy in literature and music. There are 11 auditoriums and 8 stadiums in the city	> The city shall strive to upkeep its fame as a centre for learning and arts. It shall promote its language, literature and music on different platforms and induce a sense of pride among its citizens. > Besides that, the city will improve the facilities in its ASI sites and other places of tourist importance and connect them with feeder systems.	Promotion of various schemes by the HDMC in the collaboration with the ASI which has two circles in the region and simultaneously focussing on the concept of ease of travelling to nearby UNESCO sites like Hampi,Bijapur etc. The HDMC established a museum in Dharwad for projecting the region's main cultural highlights, which has be shortlisted for award.
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 all sections of the population. The city attemps to integrate informal economic activities with formal parts of the city and its economy.	There are adequate job opportunities for all sections of society. But skill availability among residents can sometimes be a challenge.	There are adequate opportunities for jobs for all sections of income groups and skill levels. Job-oriented skill training supported by the city and by industry. Economic activities are suited to and build on locational and other advantages of the city.	SCENARIO 3	> 35.4% of the city's population is under its work force. Of this, 90% is involved in terishary sector. > Hubballi Dharawad's workforce mainly consists of traders, government employees, small and medium industrialists and industrial workers, self-employed individuals, etc. > Approval of IT parks/Manufacturing parks in the region which is expected to generate employmwnt of about 60000	> The city intends to attract the new investments as well as leverage on its strategic importance as a logistics hub and boost its traditional economic activities. > The city's local economy will be boosted through the population insurge because of new investments that generate employment.	Creation of formal skill development centres and incubation centres for the promotion of the entrepreneurship in the region. Attracting investments that can create bith direct and indirect employment.
4	Education	A Smart City offers schooling and educational opportunities for all children in the city (Guideline 2.5.10)	The city provides very limited educational facilities for its residents. There are some schools but very limited compared to the demand. Many schools are in poor condition.	City provides adequate primary education facilities within easily reachable distance of 15 minutes walking for most residential areas of the city. The city also provides some secondary education facilities.	City provides adequate primary and secondary education facilities within easily reachable distance for most residential areas of the city. Education facilities are regularly assessed through - databases of schools including number of students, attendance, teacher - student ratio, facilities available and other factors.	City provides adequate and high-quality education facilities within easily reachable distance of 10 minutes walking for all the residential areas of the city and provides multiple options of connecting with specialised teaching and multi media enabled education. Education facilities are regularly assessed through database of schools including number of students, attendance, teacher-student ratio, facilities available and other factors.	SCENARIO 3	> The city is known for its higher educational institutions, Karnataka University, Karnataka law university, SDM Medical College etc. > Along with this, the city has a strong base in education with its primary, upper primary and pre university college facilities. There are about 171 state government schools, another 65 state government aided schools, and over 150 private schools of different hierarchies in the city. Hubli-Dharwad has around 72	> All the new developments will have land earmarked for primary / high school within 1 km. All the schools, primary and secondary shall have high speed internet connections and advanced teaching aids shall be used in the classrooms. > The city will try to attract and favour the establishment of new and prestegious educational institutions, like the IIT.	In order to connect the class rooms to the larger knowledge domain, high speed internet connections to the schools can the first step. Smart class rooms, digital libraries etc. can be taken up as the CSR activities by the various industries located in the city and the corporation can facilitate the same.
5	Health	A Smart City provides access to healthcare for all its citizens. (Guideline 2.5.10)	Healthcare is difficult for citizens to access - demand for healthcare often exceeds hospitals' ability to meet citizen needs.	The city provides some access to healthcare for its residents but healthcare facilities are overburdened and far from many residents. Access to preventive health care is only easily available for some residents.	City provides adequate health facilities within easily reachable distance for all the residential areas and job centers of the city. It has an emergency response system that connects with ambulance services.	City provides adequate health facilities at easily accessible distance and individual health monitoring systems for elderly and vulnerable citizens which are directly connected to hospitals to prevent emergency health risks and to acquire specialised health advice with maximum convenience. The city is able to foresee likely potential disases and develop response systems and preventive care.Dharwad district has 2 community health centres (CHC) with labour room facilities and 11 public health centres (PHC). 8 PHCs have labour room facilities, while only 5 have operation facilities. Also, these there are 17 sub-centres in the district but only 13 of them have regular water supply. These centres are run by the Health Department, GoK, and they cater to the	SCENARIO 3	> Hubli-Dharwad is a prominent centre for health care in the north Karnataka region. The twin cities have 56 major hospitals. Hubli alone houses 33 major hospitals and there are 11 government hospitals in the region and the civil hospital has a bed capacity of 168 patients. One of the oldest mental health institutes is situated in the city.Health facilities are distributed across both cities and also both cities accommodate medical colleges also. > However, the health facilities are not distributed in between the twin cities. The twin cities have good infrastructure in terms of overall healthcare facilities. But most of the healthcare facilities are under private ownership, and the governmental hospitals are not able to cater to all the needs of the EWS.	> The government hospitals and primary health care centres will improve the infrastructure facilities and cater to more number of patients. Moreover, the health department shall make public health measures and information accessible to the public and encourage them to take proactive health measures. > More on-call ambulance vehicles made available for the public and more paramedics shall be recruited for primary health care.	Public health information can be made available in all the public spaces. Centralised control room can be provided for ambulance and on-call emergency health services, to direct the patients and the needy to the designated health care facilities. All the hospitals in the city can be brought under this umbrella, and the project can be funded inder CSR activity by the industries.

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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 segretating housing, retail, and office uses, but exceptions are made when requested.	Most parts of the city have housing, retail, and office buildings in close proximity. Some neighborhoods have light industrial uses within them (e.g., auto repair, craft production). Land use rules allow for mixed uses.	Every part of the city has a mix of uses. Everyone lives within a 15-minute trip of office buildings, markets and shops, and even some industrial uses. Land use rules require or encourage developers to incorporate a mixture of uses in their projects.	SCENARIO 3	> The proposed development plan for 2031 has classified its landuse as residential, commercial, public and semi public etc. But under each of these distinctions, a larger umbrella of building uses are allowed. Thus, the zonal regulations slightly facilitate mixed landuse. > As per the comprehensive development plan, the percentage of land under residential use has gone up from 25% to 31%.Growth in commercial land use is also not happening as envisaged in the comprehensive development plan due to overcrowding in the existing CBD at Hubli and lack of demand for commercial space in CBD at Navanagar.Commercial space - 6%,Industrial - 5%,Public and semi	> There will be more mix of land uses in all the newly developing areas in the city. The travel distances of the city shall be considerably reduced and people shall have all the facilities in walkable / cyclable distances and the use of private transportation shall be discouraged.	The DCR revisions shoud facilitate for more mixed use by bringing more building uses under each category. All the new developments shall have more mix of uses.
7	Compact	A Smart City encourages development to be compact and dense, where buildings are located close to one another and are ideally within a 10-minute walk of public transportation, forming concentrated neighborhoods. (Guidelines 2.3 and 5.2)	The city is expanding rapidly at its periphery into undeveloped land, rural or natural areas, or along industrial corridors - both formally and informally. Formal new development is occuring in a way that is "sprawling," meaning that the buildings spread across a wide area and are far from one another. Residents or tenants find it easier or safer to travel by automobile because it takes a long time to walk between destinations and there are busy roads separating buildings. Large pockets of land in the inner-city are vacant. New developments at the periphery tend to be large-scale residential developments, often enclosed with a gate and oriented to the automobile.	The city has one or two high density areas - such as the city center, or historic areas, where buildings are concentrated together and where people can walk easily from building to building and feel as though they are in center of activity. Most of the city consists of areas where buildings are spread out and difficult to walk between, sometimes with low-density per hectare. Regulations tend to favor buildings that are separated from one another, with lots of parking at the base and set-back from the streets. The city likely has some pockets of under-utilized land in the center. New formal developments at the periphery tend to be large-scale residential developments, often enclosed with a gate and oriented to	The city has multiple high density clusters that are easy to walk around where buildings are close together. However, the city actively encourages development to occur on under-utilized parcels of land into high-density, walkable areas. When new formal large-scale development projects happen at the periphery, they are encouraged to be dense and compact, with buildings that are close together and line the streets. The city actively encourages or incentivizes re-development of under-utilized parcels in the inner-city, especially those located close to public transportation.	The city is highly compact and dense, making the most of land within the city. Buildings are clustered together, forming walkable and inviting activity centers and neighborhoods. Regulations encourage or incentivize re-development of under-utilized land parcels in the city center. Buildings are oriented to the street — and parking is kept to a minimum, located below ground or at the back of buildings. Public transport and walking connects residences to most jobs and amenities. Residential density is at an optimal with affordable housing available in most areas.	SCENARIO 2	> The overall density of the city is around 4,000 persons per sq. km.The average density in the city peripheral areas is 4,000 -10,000 people per sq. km. However, the density of Hubli at 5,169 persons/km2 is more than two times that of Dharwad's density at 2,464 persons/km2.the average household size in the twin cities is about 4.7 persons per household, which is slightly higher than state average of 4.5 persons per family, and in the urban areas of Karnataka, the household size is about 4.4 people per family.	> The city shall make use of most of the land available in the city. The FSIs along the 24m roads shall be increased to 3.5 - 4 depending on the character of the development.	The transit oriented development along the corridor shall exhibit a model for compact development in all the newly developing areas. The high dendity areas in the centre of the city shall be facilitated with NMT networks, vending and parking regulations to contain the high population.
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	> The major parks in Hubli are Mahatma Gandhi Park, Kittur Chennamma Park, Azad Park, and University Park.The area covered by parks and open spaces in the Twin cities is around 663 acres which is around 6%. > The educational institutions have their own smaller parks and play grounds. The major stadiums in Hubli are Karnataka University Stadium, Police Headquarters Stadium at Dharwad, and HDMC Playground. A new stadium has been constructed at Dharwad with the support of the town planning authority. > There are around 16 places where parks,	> All the neighborhoods shall have well maintained parks equipped with play and gym infrastructure, spacious enough to match the 12 sqm percapita norm od URDPFI.	Creating the neighborhood public open spaces with all the safety precautionary measures to prevent vandalism. Upgrading the infrastructure in all the existing public spaces.
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	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	A wide range of a housing is available at all cost levels. The supply of housing is growing at pace with population. Affordable, moderate, and luxury housing are found clustered together in many areas of the city	SCENARIO 2	Slum Rehabilitation Programme(RAY), Total DUs 2128 in 6 Slums(Total DUs) • 3 Models of affordable housing(G+3 structures),mechanized pre-cast technology • Powrakarmika Griha Bhagya Scheme (320 houses and 122 free 20x30 plots) • Proposed "PMAY" scheme for 3 slums(8000 households) approval awaited	> Infrastructure shall be upgraded in all the slums and basic amenities shall be provided. > New affordable housing shall be added with all the new development.	Acceleration of the housing schemes like RAY and HFA in the region. Identification of alternative regions of development like Gokul and Keshwapur and promotion of development schemes by private players for creation and supply of housing, with the right mix of affordable housing in all developments.

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	A	B	C	D	E	F	G	H	J	K
10	Transport	A Smart City does not require an automobile to get around; distances are short, buildings are accessible from the sidewalk, and transit options are plentiful and attractive to people of all income levels. (Guidelines 3.1.5 & 6.2)	Personal automobile centric city with very few modal options. Long trip lengths for daily commute to work and education. Accessing various areas by walking or cycling is difficult. Women and vulnerable sections find it very difficult to move independently in the city. There is limited public transport. Vehicles cause high air and noise pollution levels in the city. Vehicles dominate public spaces and affect their effective functioning.	The street network system is elaborate but public transport choices are restricted. Public transport can be too expensive or unaffordable for the poor. Pedestrian infrastructure is only available in select areas. Tha majority of investments focus on reducing traffic congestion through the creation of more roads.	Network of streets are fairly complete. Public transport covers most areas of the city. However last mile connectivity remains incomplete -and affects transport options. Foot paths are accessible in most areas, whereas concerns of safe crossings and security throughout the day remain. Parking zones are demarcated but absence of pricing increases over utilization of parking lots.	Street network is complete and follows a clear structure. Public transportation network covers the entire city and intensity of connection relates with the demand. Plenty of options of public transport are available and affordable for all sections of the society. There is multi-modal integration at all mass transit staions and organized-priced on street and off street parking. Walking and cycling is prevalent.	SCENARIO 1	22% of the land use is reserved under traffic and transport,The per capita road length is about 0.8 km,The total length of roads in the territorial jurisdiction of HDMC is about 630 km, of which 67% are surfaced (Bitumen–top / WBM).more than 60% of the road network doesn't have proper pedestrian facilities within the twin cities.56% of the roads have speeds below 30 kmph. About 11% of the roads have speed above 40 kmph. The average journey speed is 27.85 kmph, and the average running speed is 32.05 kmph.21.82% of the registered vehicles are privately owned. 17% are autos and 1% is government-owned vehicles.The operational intra-city routes have a fleet deployment of about 298 buses catering to about 4,00,000 passenger trips. Almost 1,300 passengers are carried per bus per day.However, the cities have only a very	> The rapid transpot shall connect the the two cities and all the areas in the city shall be connected through the feeder systems using buses, autos and cycle networks. > Measures will be taken to improve the travel speeds and the overall interventions will be done keeping children and pedestrians in the centre.	Strengthen the feeder service networks of auto rickshaws and e-rickshaws in the city. Exploring models like public bicycle sharing and improving the traffic management practices like junction improvement, one way traffic lanes etc. to reduce congestion.
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 accesible from the front of the street. large driveways or parking lots often separating them from the street, and sometimes are are enclosed by gates. In these areas, traffic signals are disobeyed.	The city has a good network of pavements and bike lanes. Buildings in most areas of the city are easily accessible from the pavement. Howver, traffic signals are sometimes disobeyed and it can feel difficult to cross the street.	The city is highly walkable. Pavements exist on every street and are maintained. Trees line many sidewalks to provide shade for pedestrians. Buildings in most areas of the city are easily accessible from the sidewalk. Traffic signals control the flow of automobiles and are enforced. A network of bike lanes exists to promote cycling as a means of transport. Traffic rules are followed and enforced with great seriousness.	SCENARIO 1	NMT 1% of total road length. Footpaths at 6% of road length.Lack of pddestrian friendly zones in the city and heavy traffic on the roads due to dual side traffic parking in the CBD causes the people to stay away from the roads.	> The NMT networks in the city shall be complete. All th crossings will have signages and signals to ensure the pedestrian safety. Safety and security, at all times, for all the age groups shall be the prime concern for the city.	Continuous and improved NMT infrstructure network through the city. Signallised junctions, zebra crossings and tabletop crossings to be installed in the city for the ease of pedestrians. School and hospital zones to be furnished with signages for free movement of pedestrians.
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 in most parts of the city.	The city offers free wifi services to provide opportunity for all the citizens to connect with high speed internet across the city.	SCENARIO 2	Proposed Wi-Fi zones at 3 major locations in the city(Karnataka University,Dharwad,Agriculture University,KLE institute campus)	Public WiFi shall be made available at bus stops and all the public buildings.	Public Wifi at all the public buildings, bus stops, major transit nodes, schools etc. In the longer run, access ponts can be installed on street lights to provide wifi through the city.
13	ICT-enabled government services	A Smart City enables easy interaction (including through online and telephone services) with its citizens, eliminating delays and frustrations in interactions with government. (Guidelines 2.4.7 & 3.1.6 & 5.1.4 & 6.2)	Essential Government services are not linked with online platforms. Paper intensive interactions with the local Government continues. Recieving services and response to citizen complaints take a long time. There is limited availability of data to monitor service delivery.	Some of the public services are provided online and infrastructure for total digitalization is not in place. Service delays occur regularly in some sectors. Responses to citizen inquiries or complaints are often delayed. No integration between services and billing.	Most of the services are provided online and offline. Data transparency helps monitoring. Systema and processes to better coordinate between various Government agencies are being developed.	All major services are provided through online and offline platforms. Citizens and officials can access information on accounting and monitor status of projects and programs through data available on online system. Robust data infratsructure system shares information and enhances internal governmental coordination.	SCENARIO 2	The e-gov platform of the city is one of the best in the state. The corporation is facing the problems in terms of skilled man power to run the corporation's virtual service delivery mechanism. Moreover the lack of multi-platform is affecting the reach of the HDMC and the concept of inclusion is seriously dented.	More people shall be brought under the umbrella of e - governance, the city shall strive to go paperless. High levels of transparency will be achieved in all government services.	Expanding HublidharwadOne to include more services and bringing more citizens to use it, provision of information regarding all the facilities to the citizens by notofications to registered numbers,Information kiosks established at all the major zonal offices and Creation of the a skill development center near Dr. Bendre Hall with two floors of dedicated traning facility of the HDMC employees for capacity building
14	Energy supply	A Smart City has reliable, 24/7 electricity supply with no delays in requested hookups. (Guildeline 2.4)	There is only intermittent electricity supply with regular power shedding. Many residents have to plan their days around when power is available.	Electricity supply and loads are managed as per demand and priority for various functions with clear scheduling, with electricity being available in many areas for most hours of the day.	Electricity is available in most parts of the city for most hours of the day but some areas are not so well-served. Smart metering exists in some parts of the city but not all.	Electricity is available 24 x 7 in all parts of the city with smart metering linked to online platforms for monitoring and transparency.	SCENARIO 2	AMR provided for all HT consumers Unscheduled Outages : 66 minutes to 63 minutes Scheduled Outages : 102 minutes to 103 minutes Initiated 24x7 IT for Billing/Collection and customer relations. Conversion of existing 11 KVA overhead line to underground cable implementation is in progress Electrical Consumption - Residential (126kWh per capita), Commercial (1397kWh per annum), Institutional (7153MWh/sq.km/annum), Energy consumption per sq. km 2923MWh/sq.km/ annum	> The city shall strive to achieve 24/7 power supply, with minimum T&D losses. > Smart meters will be installed for all the households.	Installing smart meters for all the connections provided in the city. Encouraging the citizens to augment the power supply by using laternatives like solar energy and biogas by incentivising them.
15	Energy source	A Smart City has at least 10% of its electricity generated by renewables. (Guideline 6.2)	The city does not have any renewable sources of energy and there is no commitment to promote this for the forseeable future.	The city is preparing plans for ensuring that it gets more energy from renewable sources and is in the process of making commitments in this regard.	Some energy consumed is the city is produced through renewable sources. There are long term targets for higher renewable energy capacities and the city is making plans to achieve these.	At least 10% of the energy used in the city is generated through renewable sources. The city is undertaking long-term strategic projects to tap renewable sources of energy in its region/beyond to increase the percentage of renewable energy sources.	SCENARIO 2	> Inititated Roof-Top solar PV to all HESCOM Offices > Roof top solar was manadated in the year. > Promotion of ADITYA solar shops in the city. > Establishment of the solar cell in the HDMC. > Projected reductions of the GNG from 1% to 5% in 5 years.	> Solar shall emerge a strong alternative source of power in the city. > The use of smart appliances wich will reduce the power demand will be encouraged.	MNRE GOI, accorded approval for Hubbali. Prepared Master Plan for Development of HDMC as Solar city. Esatablishment of Solar city Cell in HDMC in 2012-13 to impart information to Public.

A	B Feature	C Definition	D Scenario 1 (BASE)	E Scenario 2	F Scenario 3	G Scenario 4 (ADVANCED)	H Self-assessment of the city (for Pan-City Solution) with regard to each feature	I Basis for assessment and/or quantitative indicator (Optional - only if data exists)	J Projection of 'where the city wants to be' with regard to the feature/indicator	K Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G)
16	Water supply	A Smart City has a reliable, 24/7 supply of water that meets national and global health standards. (Guidelines 2.4 & 6.2)	The city has a poor water supply system with limited water availability. There are no clear targets to achieve higher quality and optimal quantity standards. Unaccounted water loss is above 40%	The city has intermittent water supply and availability. However it is setting targets and processes in place to try to improve its water supply. Unaccounted water loss is less than 30%.	The city has 24 x 7 water supply in most areas but the quality of water does not meet international health standards. Unaccounted water loss is less than 20%.	The city has 24 x 7 treated water supply which follows national and global standards and also available in suffecient quantity and affordable across all sections of the society. Unaccounted loss less than 15%.	SCENARIO 2	> Existing Frequency of Water Supply is once in 3 days to once in 5 days > Duration of watersupply-3 Hrs to 5 Hrs. per day > The demo zones for 24/7 water supply are wards 8,9,10, and 11 in Dharwad and wards 6 (part), 17, 19 (part), 23, 24 (part), 32, 33 (part), 42 (part), 43 (part), 44, and	> Upscaling 24/7 water supply all across the city > 100% HSC connections with smart water meters all over the city.	Clearance of the 24x7 scheme across all the wards of the HDMC which is piloted in certain regions and future intervention on the base of ICT to control and improve efficiency of delivery and monitoring is proposed.
17	Water management	A Smart City has advanced water management programs, including smart meters, rain water harvesting, and green infrastructure to manage stormwater runoff. (Guideline 6.2)	The city does not measure all its supply. It does not recycle waste water to meet its requirements and rain water harvesting is not prevalent. Flooding often occurs due to storm water run-off.	The city has meters for all its water supply but lacks mechanisms to monitor. Water wasteage is very high. Some, but not much, rainwater harvesting exists.	The has meters for all its water supply with some smart mechanisms to monitor. Rainwater harvesting systems are installed and storm water is collected and stored in water bodies. However, recycling of waste water and reusage of	The city has meters for all its water supply. It includes smart mechanisms to monitor remotely. Rainwater harvesting systems are installed and utilised through the city and storm water is collected and stored in water bodies and treated for usage. Recycled waste water is supplied for secondary uses.	SCENARIO 1	> Primitive system of operation void odf ICT interventions and implementation. > NRW loss reduced from 51 % to 35% ; NRW in other wards is 37% and 15% in 24/7 piloted wards.	> The city shall encourage citizens to reduce wastage of water and to recycle water at a household level. > Rain water harvesting shall be made extensive, as the cities are already blessed with ample rainfall.	24 x 7 Watersupply project shall have complete water meters RWH shall be initiated at various locations Preparation & implementation of Master Plan for Storm water drainage system wih monsoon specific plan
18	Waste water management	A Smart City treats all of its sewage to prevent the polluting of water bodies and aquifers. (Guideline 2.4)	The city is unable to treat all its sewage. Many local sewer lines open on to water bodies and open ground and pollute the environment.	Most waste water is collected and treated before before disposal. However the treated water does not meet standards and is not recycled for secondary uses.	All the waste water is collected and treated before before disposal. It is also treated to a high standard and some is recycled.	The city has zero waste water because all the waste water is collected, treated and recycled. It meets standards an reduces the need for fresh water.	SCENARIO 2	Presently about 50% of the area is covered with UGD network connected with Trunk Main leading to STP 40 MLD capacity with SBR technology constructed recently and is operating efficiently	> 100% UGD shall be achieved in the city. > 100% water shall be treated and reused.	For 100 % coverage, sewage laterals and sub mains from variousareas/ layout to be connected to Trunk main. Additional STP of 40 MLD capacity (2026) with SBR technology is required Channels like industrial usage, landscapng etc. shall be identified for treaated water reuse.
19	Air quality	A Smart City has air quality that always meets international safety standards. (Guideline 2.4.8)	City does not have plans, policies or programs to improve the air quality. Systems to monitor air quality are absent.	City has programs and projects to monitor air quality and spatialising the data to ascertain reasons for degrees of pollution in the air. A few strategies to decrease air pollution have been	City has programs and projects to monitor air quality and spatialising the data to ascertain reasons for degrees of pollution in the air. Pollution levels are	The city has clean air by international standards. Live Air quality monitoring cover the entire city and data of air quality are mapped.	SCENARIO 2	Two Air Quality monitoring stations exists one at Hubli near New Bus Stand, Gokul Road the second one at Dharwad near Lakkammanahalli in KSPCB premises.	More greenery will be added to the city to make the air quality meeting the international standards. The use of electronic vehicles and use of clean fuels will be encouraged.	Regular air quality monitoring and information shall be displayed in the traffic junctions, as a motivation for the people to reduce private vehicle usage.
20	Energy efficiency	A Smart City government uses state-of-the-art energy efficiency practices in buildings, street lights, and transit systems. (Guideline 6.2)	City has no programs or controls or incentive mechanisms to promote or support energy effeciency in buildings	The city promotes energy efficiency and some new buildings install energy effeciency systems that track and monitor energy use and savings.	Most new public buildings install energy effeciency systems and some older buildings are also retrofitted to be more energy efficient. Local government conducts counselling and outreach with developer, businesses and residents to adopt energy	All the existing old and new public buildings employ energy effeciency principles in development and operation and apply for energy rating by national and international forums. Many non-public buildings are also energy efficient because the government promotes energy efficiency through incentices and regulations.	SCENARIO 2	The twin cities have more than 40,000 streetlights. HDMC now uses tube lights, sodium vapor lamps, mercury vapor lamps, high-mast installations, and other bulbs for illumination. During March 2013, HDMC installed LED bulbs in 121 streetlights. However, around 40 km of stretch is still not served with streetlights.	> All the street lights will be of state of the art energy efficient technology. > Public buildings shall be retrofitted for energy efficiency.	HDMC to ensure energy efficiency in street lighting by installing LED bulbs on streetlights. to beat the rising cost of electricity bills and to save energy. HDMC expects to save about 40% in the monthly electricity bills by using LED lights.Solar policy in place and to be implemented.
21	Underground electric wiring	A Smart City has an underground electric wiring system to reduce blackouts due to storms and eliminate unsightliness. (Guideline 6.2)	City does not have plans for underground electric wiring system.	More than 40% of the city has underground electric wiring system.	More than 75% of the city has underground electric wiring system.	More than 90% of the city has underground electric wiring system.	SCENARIO 2	Work order for conversion of existing 11KV overhead line to UG cable system in Hubali CSD-1,CSD2,CSD3 subdivisions,issued in 2015.Around 30% coverage completed.	> 100% underground cabling will be done, along with the fibre optic wiring to minimise thefts and protect the greenery.	Initiated action for coverage of the HDMC area is under progress. All the new footpaths shall have ducting underneath.
22	Sanitation	A Smart City has no open defecation, and a full supply of toilets based on the population. (Guidelines 2.4.3 & 6.2)	Many parts of the city do not have access to sanitation infrastructure and facilities.	Sanitation facilities are availabile to 70% of the city's population.	Sanitation facilities are available to 90% of the city's poopulation.	Sanitation facilities are available to 100% of the city's population.	SCENARIO 2	> 86% HHs have IIHLs > Under SBM and other SC/ST Schemes individual household toilets and community toilets constructed > 100% fecal sludge management is not achieved.	> The city shall be 100% OD free. > 100% Fecal sludge will be colleected and disposed in a safe way.	Tendering process is underway to construct 43 nos. of community toilet and 72 number of Public Toiets, with Individual Household Toilets on contineous process under Swachh Bharat Mission. IEC campaigns to be promoted to reduce open defacation. IFSM plan to be drafted and implemented by the
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.	Waste collection systems do not pick up waste on a frequent basis and waste often enters into water bodies.	Waste generated is usually collected but not segregated. Recycling is attempted by difficult to implement.	Waste is segretated, collected, recycled and disposed in an environmentally sound manner.	The city reduces land fill caused by waste so that it is minimal. All the solid waste generated is seggregated at source and sent for recycling. Organic waste is sent for composting to be used for gardening in the city. Energy creation through waste is considered.	SCENARIO 2	> Quantity of MSW generated per day in the ULB is about 400 TPD.Quantity of MSW collected per day in the ULB is 373 TPD	> 100% waste management in the entire city. > Only 10% of the waste generated shall reach the landfill.	ISWM DPR approved by the State Government under Swachh Bharat Mission which aims at a Zero waste strategy. Tendering acivities for various components of the DPR is under progress.
24	Safety and security	A Smart City has high levels of public safety, especially focused on women, children and the elderly; men and women of all ages feel safe on the streets at all hours. (Guideline 6.2)	The city has low levels of public safety most groups of residents feel insecure during most parts of the day in many parts of the city.	The city has medium levels of public safety - some more vulnerable groups feel insecure during some points of the day and in some parts of the city	The city has high levels of public safety - all citizens including women, children and the elderly feel secure in most parts of the city during most time in the day.	The city has very high levels of public safety - all residents feel safe in all parts of the city during all hours of the day.	SCENARIO 3	> Existing 218 CCTVs installed at sensitive areas and monitored. > Proposed plans to extend CCTVs for the year 2017-18 , 2018-19, 2019-20 are 36 nos, 50 nos and 50 nos respectively.	> High levels of public safety shall be achieved in the city. The city shall be safe for all age and community groups.	Aligning it with the People Empowerment Platform by making it into a two way platform which can record citizen's complaints regarding safety and security. The law enforcing agencies can use this platform for collective decision making.