IFC | INSTITUTE for COMPETITIVENESS

Smart City
MISSION TRANSFORM-NATION

Ministry of Housing and Urban Affairs
Government of India

150 YEARS OF CELEBRATING THE MAHATMA

स्वच्छ भारत
एक कदम स्वच्छता की ओर

Municipal Performance Index 2019

Assessment Framework

DAY-NULM
Deendayal Antyodaya Yojana-National Urban Livelihoods Mission

HRIDAY
Rejuvenating the Soul of Urban India

प्रधान मंत्री आवास योजना-शहरी
Pradhan Mantri Awas Yojana-Urban

अमृत
Atal Mission for Rejuvenation and Urban Transformation

Urban Transport

CONTENT

Durga Shanker Mishra

Secretary, MoHUA

MESSAGE

Cities are drivers of economic growth and important units of local governance within a nation. The development and growth of a nation, is influenced to a large extent by its cities. The Smart Cities concept relies on fostering a balanced confluence of two mega trends: Rapid Global Urbanization and Digital Technologies 4.0 revolution. These trends have consequences on our efforts to improve liveability for citizens, enhance human capital and transform the relationship between Government, Civil Society and Market Players in an environmentally, sustainable and inclusive manner.

The governance of cities is determined by the functioning of Municipalities. They are the key agents that provide the enablers into making a city 'Smart'. With this view, Ministry of Housing and Urban Affairs is launching the first ever Municipal Performance Index 2019 to assess and analyse the performance of Municipalities across the country in all 100 Smart Cities and million plus population cities, based on their defined set of functions. The assessment will examine the sectoral performance of Municipalities across a set of five verticals namely Services; Finance; Technology; Planning and Governance which include 20 sectors (Education, Health, Water & Wastewater, SWM & Sanitation, Registration & Permits, Infrastructure, Revenue Management, Expenditure Management, Fiscal Responsibility, Fiscal Decentralisation, Digital Governance, Digital Access, Digital Literacy, Plan Preparation, Plan Implementation, Plan Enforcement, Transparency & Accountability, Human Resource, Participation and Effectiveness) and 100 indicators.
The Municipal Performance Index will act as a guide to evidence-

based policy making, catalyse action to achieve broader developmental outcomes including the Sustainable Development Goals, assess and compare the outcomes achieved by municipal bodies, give citizens an insight into the functioning of local bodies and build a dialogue between the stakeholders.

An exercise of this scale would not have been possible without the phenomenal leadership and teamwork of officers of the Smart Cities Mission and supporting partners in designing such a comprehensive Assessment Framework. All of them deserve my appreciation.

Kunal Kumar

Mission Director, Smart Cities Mission, MoHUA

MESSAGE

The Government of India's (GoI) national objective of development for all converges well with the Sustainable Development Goals and the 2030 Agenda. With cities being the engines of growth of a country, the Ministry of Housing and Urban Affairs has launched several initiatives such as the Swachh Bharat Mission (SBM-U), Pradhan Mantri Awas Yojana (PMAY-U), Deen Dayal Antyodaya Yojana-National Urban Livelihood Mission (DAY-NULM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Smart Cities Mission (SCM), HRIDAY and others to accelerate India's urban growth story.

These missions collectively seek to foster a better quality of life for India's urban citizens through improving urban governance, city planning and availability and quality of urban infrastructure. Urban Local Bodies are critical units of local governance and are the most important agency in implementation of these Missions. The key enablers that influence the performance of urban local bodies can be broadly classified into five verticals- Services, Finance, Policy, Technology, and Governance. These are the pillars based on which we have decided to frame the Municipal Performance Index 2019 so as to build a performance measurement system that can be adopted at the local level for a granular assessment of performance of these urban local bodies.

The Index seeks to facilitate Smart Cities and other million plus population cities in assessment of these five enablers, that will eventually help Municipalities in better planning and management, and help in filling the gaps in city administration, thereby improving the liveability of cities for

its citizens. These five pillars have been divided into 20 categories and 100 indicators that will help in assessing the performance of municipalities against these pillars. Since cities across India show wide variations in level of development and population sizes, we have divided cities into different tiers for better comparison based on their population sizes.

This Framework addresses the methodological issues vis. reasons for selection of one method over others and lists down the steps that will be followed to calculate the Index. It carries the methodology used to score various indicators on a relative scale across municipalities. Furthermore, the report also outlines the challenges that will be encountered while calculating the Index and the means to resolve them.

I hope that this framework will help urban local bodies in reducing the complex realities of governance into a few understandable dimensions that can be measured and quantified. It will help the cities in better planning and move towards data driven governance that will eventually improve the liveability of cities.

The accuracy of this framework relies heavily on reliable data input by the cities, therefore I urge the cities to make their best efforts in careful self-assessment that will result into data-driven empowerment, collaboration and governance in cities. I wish everyone all the best for this most important exercise!

Introduction

The third millennium is witnessing the largest wave of urbanization across the world. More than 50 percent of the world's population is now living in the cities. This ratio is expected to rise to 70 percent by 2050. Cities are now at the core of economic, social and political developments. A growth of such urban agglomerations also come with a commensurate rise in challenges of climate change, crime, poverty, disease and the exhaustion of natural resources that need to be addressed by city planners and municipalities.
The World Bank, UN agencies and governments across the globe have developed international instruments and agendas to guide urbanization; turning these challenges into opportunities for a better world. These include Sustainable Development Goal (SDG) 11 and the New Urban Agenda (NUA) , which facilitate the implementation of effective public policies, adoption of enhanced novel-planning techniques and the integration of technology-supported frameworks.

The Government of India (GoI) is strongly committed to the 2030 Agenda, including the Sustainable Development Goals, as reinforced by the Prime Minister and other senior ministers at national and international meetings. India's national development goals and its "Sab ka Saath, Sab ka Vikas" (development with all, and for all) policy initiatives for inclusive development converge well with the SDGs. To quote Hon'ble Prime Minister - "These goals reflect our evolving understanding of the social, economic and environmental linkages that define our lives". India will play a leading role in determining the success of the SDGs globally.

India is urbanizing at a rapid pace and it urgently needs to address the challenges that come with it to stay committed to the SDG goals. The country's urban population was 37.7 crore (31%) in 2011 census. This is projected to increase to 60 crore (40%) by 2030 and over 80 crore (50%) by 2050. As per 2011 census, urban India contributed 63% to the country's GDP. This is projected to grow to over 75 percent by 2030 and more than 80 percent by 2050. Such rapid urbanization offers India an incredible window for further transforming the economy and fueling growth. But growing urban population also creates a huge challenge to the civic infrastructure and services like sanitation, water, sewage, housing, electricity, public transport etc.

Due to sheer concentration of people and assets in cities, their vulnerability to the impacts of climate change, disasters and conflicts increases manifold. Addressing these challenges demands deeper engagement, complex program design, robust and agile implementation mechanisms and a rigorous evaluation and monitoring framework. However, when planned and managed well, cities become engines of growth. This requires appropriate policies and programs for the urban planning, construction, development, management, and improvement of urban areas. Key pillars of transformation viz., urban policies, legislation and regulations; urban planning and design; local economy and municipal finance; capacity building within the urban ecosystem; and appropriate adoption of innovative technology need to be paid attention to in a comprehensive manner.

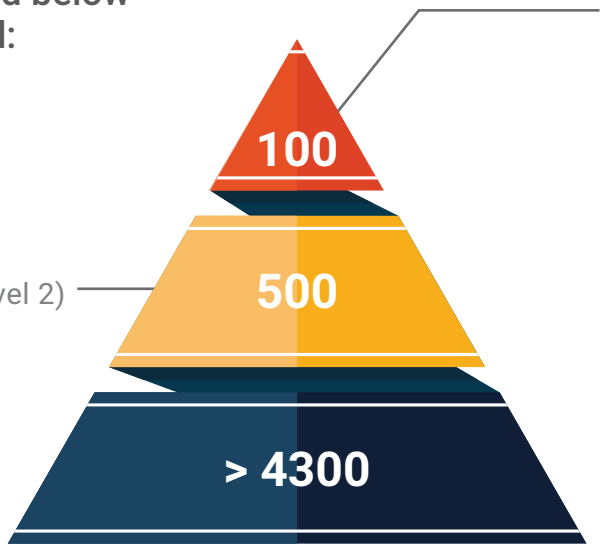
The population migrating from rural to urban areas have dreams and aspirations to improve their quality of life with better facilities for living and livelihood that includes physical, social, institutional and economic infrastructure. All these pose huge challenges in view of rapid urban growth. Hon'ble Prime Minister saw these challenges as big opportunities to drive the economy forward—investments in infrastructure will create jobs, improve ease of living and employ citizens to best of their abilities in service of the nation. To tackle the challenges and make the best out of the opportunities in the cities, the Government has launched several initiatives such as the Swachh Bharat Mission (SBM-U), Smart Cities Mission (SCM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Pradhan Mantri Awas Yojana (PMAY-U), Deen Dayal Antyodaya Yojana-National Urban Livelihood Mission (DAY-NULM) under Ministry of Housing and Urban Affairs. These missions collectively seek to foster a better quality of life for India's urban citizens through improving urban governance, city planning and availability and quality of urban infrastructure.

[1] SDG 11 forms one of the key goals of the 2030 Agenda for Sustainable Development. The specific target addressed by this project is 11.3 – "By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries"

[2] The New Urban Agenda (NUA) represents a shared vision for a better and more sustainable future. If well-planned and well-managed, urbanization can be a powerful tool for sustainable development for both developing and developed countries. This was endorsed by the United Nations General Assembly at its sixty-eighth plenary meeting of the seventy-first session on 23 December 2016. The specific commitments of NUA addressed by this project are:

- "We will strive to improve capacity for urban planning and design and the provision of training for urban planners at national, subnational and local levels and
- We will foster the creation, promotion and enhancement of open, user-friendly and participatory data platforms using technological and social tools available to transfer and share knowledge among national, subnational and local governments and relevant stakeholders, including non-State actors and people, to enhance effective urban planning and management, efficiency and transparency through e-governance, approaches assisted by information and communications technologies, and geospatial information management."

A three-level strategy, as highlighted below was followed:



Smart Cities (Level 3)
100 Smart Cities address the issue of Ease of Living through increased use of digital technology and optimum utilization of resources and are developed as lighthouses

AMRUT Cities (Level 2)
Water Supply and Sewerage/ Septage which need economies of scale are implemented in 500 AMRUT cities with more than 1 lakh population.

All Cities (Level 1)
Poverty Alleviation, Affordable Housing and Cleanliness are addressed through DAY-NULM, PMAY (U) and SBM (U) for all the urban local bodies.

At the first level, poverty alleviation, affordable housing and cleanliness are the three biggest challenges. Deen Dayal Antyodaya Yojana-National Urban Livelihood Mission (DAY-NULM), Pradhan Mantri Awas Yojana – Urban (PMAY-U) and Swachh Bharat Mission-Urban (SBM-U) are implemented in all the urban local bodies.

At the second level, basic infrastructure like water supply and sewerage/septage projects and green parks are in the focus. These sectors require economies of scale and are being implemented in 500 cities, with 1,00,000 and above population through Atal Mission for Rejuvenation and Urban Transformation (AMRUT). This covers over 65% of urban population

Finally at the third level, 100 cities are being developed under Smart Cities Mission (SCM) to address the issue of ease of living by evolving new paradigms of urban governance with communities at the core and an increased use of digital technology to improve the urban infrastructure, services and optimum utilisation of resources.

The objective of the Smart Cities Mission (SCM) is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The application of 'Smart' Solutions, creating replicable models which will act like a light-house to other aspiring cities, and harnessing of technology that leads to Smart outcomes are the bold initiatives under SCM. Such initiatives reflect not just the inputs that are reaching our citizens but what outcomes these investments have over a period of time.

Municipalities are critical units of local governance within a nation. The performance of municipalities is dependent on key strengths which enable them to execute the functions entrusted to them in an efficient and productive manner. These enablers make them capable of making a city 'smart'. These enablers can be broadly classified as Services, Finance, Policy, Technology, and Governance. It becomes crucial to build a performance measurement system that can be adopted at the local level for a granular assessment of these enablers or drivers of growth.

With the Municipal Performance Index 2019, the Ministry has sought to facilitate Smart Cities and other million plus population cities in assessment of these five enablers, that will eventually help Municipalities in better planning and management, filling the gaps in city administration as brought out in their self-assessment, thereby improving the livability of cities for its citizens.

The Municipal Performance Index is an effort to assess and analyse the performance of Indian municipalities based on their defined set of functions. The responsibilities of a municipality span across a range of verticals that include provision of basic pubic services to more complex domains like urban planning. The Municipal Performance Index is meant to complement the Ease of Living Index, which in turn gives insight into the liveability within Indian cities as a result of the services provided by local bodies.

Another reason for measurement of performance of municipalities is that various stakeholders including citizens demand such information. Performance measurements also provide a convenient way to depict and report information as it reduces the complex realities of governance into a few understandable dimensions that can be measured and quantified. Such reports of municipal performance carry the potential to keep citizens informed and build trust and confidence in their local governments.

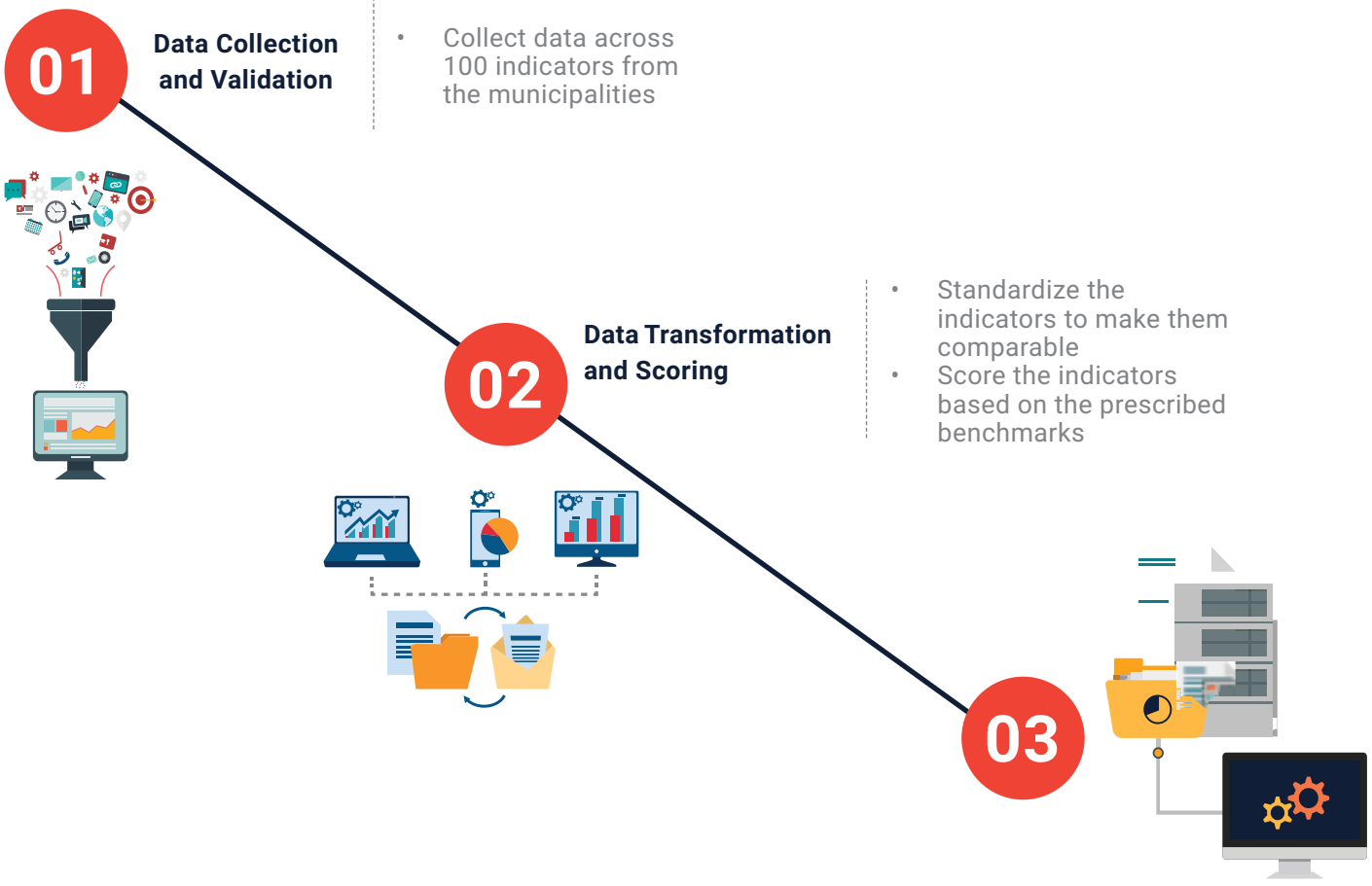
Key Objectives of the Municipal Performance Index

- Generate information to guide evidence-based policy making;
- Catalyse action to achieve broader developmental outcomes including the Sustainable Development Goals
- Assess and compare the outcomes achieved by municipal bodies with given set of resources;
- Give citizens an insight into the functioning of local bodies and build a dialogue between the stakeholders

This report outlines the methodology that will be adopted in building the Municipal Performance Index. The development of such a comprehensive index that can accurately measure performance of a multi-functional body is a complicated task as it requires selection of the most suitable method for the following factors: weights of the indicators (objective or subjective), aggregation process (average or weighted), and comparative analysis (relative or absolute).

This report presents a discussion on the same, addressing methodological issues such as why one method was chosen over the others and lists down the steps that will be followed to calculate the Index. The following sections describe the framework used to measure municipality performance and delve into more detailed explanations of the various pillars and indicators under each vertical. It carries the methodology used to score various indicators on a relative scale across municipalities. Furthermore, the report also outlines the challenges that will be encounted while calculating the Index and the means to resolving them.

Overview of the Process



01

FRAMEWORK OF THE INDEX

The Municipal Performance Index examines the sectoral performance of municipalities across a set of **five verticals,** which encompass its mandated functionalities. The five verticals inculcate a total of **20 sectors** and **100 indicator**s within its fold. The framework has been developed after a rigorous process of discussions and consultations with various experts in the field of local governance.

The verticals that are covered by the Index include:

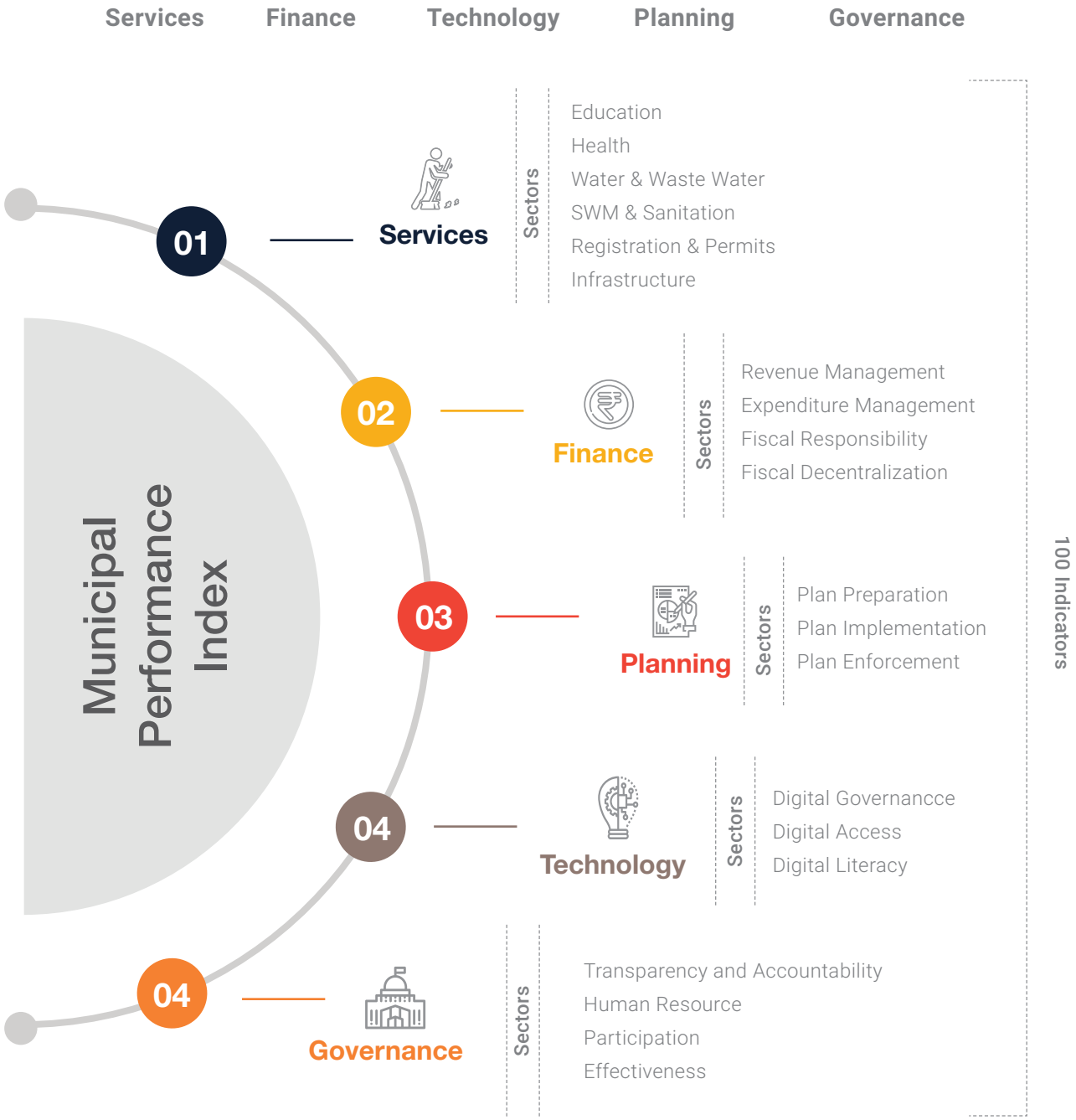


Figure 1: Framework of the Municipal Performance Index

The vertical of services includes all functions that citizens experience on a daily basis like water supply to households and door-to-door waste collection. The finance vertical assesses the effectiveness with which public funds are managed. Meanwhile, Technology delves into the digital coverage of municipality services and the extent to which it empowers its citizens to access them. The vertical of planning evaluates municipalities on their preparation, implementation and enforcement of urban planning. Lastly, the governance vertical covers the administrative aspects of the municipal body.

It is evident that the sectors under each vertical vary in number based on the range of functionalities they encompass. **Since each of these 20 sectors are equally crucial in municipal performance, they have been given an equal weightage**. As a result, the five verticals received the following weightages:

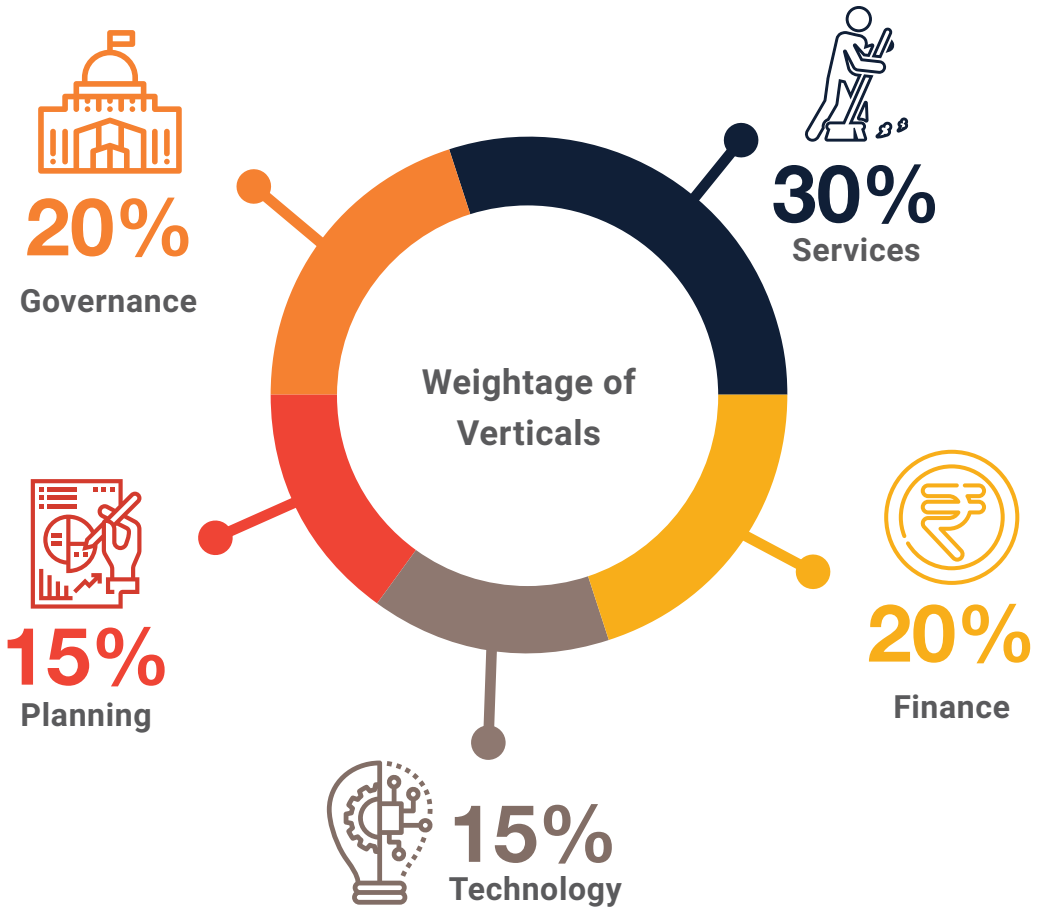


Figure 2: Weightages of the Verticals for Municipal Performance Index

With such a distribution, where the vertical of Services receives the highest weightage of 30 percent, verticals of finance and governance receive an equal weightage of 20 percent, and finally, Technology and planning receive a weightage of 15 percent each, all sectors within these verticals have been awarded an equal weightage. For instance, education under the vertical of Services has been given as much weightage as digital literacy under the vertical of Technology.

The index with a compiled list of indicators has been presented below. A detailed list can be found in the Appendix.

Municipal Performance Index

Services

Education

- Vacancy of Teachers
- Pupil-Teacher Ratio
- Expenditure

Health

- Primary Healthcare Institutions
- Vacancy of Doctors
- Expenditure
- Community Healthcare Workers

Water & Waste Water

- Household with Piped Connection
- Water Supplied
- Wastewater Treatment
- Storm Water Drainage
- Sewerage Netwok

SWM & Sanitation

- Garbage Collection
- Street Cleanliness
- Waste Disposal
- Waste Treatment
- Sewage Treatment Capacity
- Household Sewer Connection

Registrations and Permits

- Registration Efficiency
- Online Registration
- Ease of Obtaining Permits
- Online Registration of Permits
- No. of Licenses Awarded
- Online Registration of Licenses

Infrastructure

- Roads with Street Lights
- Street Light with LEDs
- Expenditure on Road Maintenance
- Road Density
- Foothpath Density
- Community Services

Finance

Revenue Management

- Own Revenue vs Total Revenue
- Tax Revenue vs Own Revenue
- Tax Coverage Efficiency
- Properties Mapped on GIS
- Tax Collection Efficiency
- Review of Property Tax
- Last Revision
- Accounting System
- Alternate Sources of Financing
- Budget Efficiency

Expenditure Management

- Central Grant Expenditure Efficiency
- State Grant Expenditure Efficiency
- Capital Expenditure vs Total Expenditure
- Establishment Exp. vs Total Exp.
- Salary Expenses vs Total Own Rev.
- Preparation of Budget Estimate
- Capital Expenditure per capita
- Establishment Expenditure per capita

Fiscal Responsibility

- Participatory Budgeting
- Budget Variance
- External Audit
- Data Sharing
- Internal Audit
- Publication of Audits

Fiscal Decentralization

- Tax Collection Powers
- Borrowing Powers
- Credit Rating

Technology

Digital Governance

- e-Governance Initiatives
- Command and Control System
- Number of e-tenders
- Value of e-tenders
- Open Data Policy
- Presence of CDO
- City-data Alliance
- Presence on Open Data Portal

Digital Access

- Internet Access
- Usage

Digital Literacy

- Number of People Trained
- Digital Literacy Programmes
- Number of Centres

Planning

Plan Preparation

- Development Plan
- Plan on GIS Platform
- Planning by Town Planners
- Town Planning Schemes

Plan Implementation

- Land-titling Law
- Land-pooling Law
- Single-Window Clearance
- Green Buildings

Plan Enforcement

- Plan Violations
- Plan Efficiency

Governance

Transparency & Accountability

- Disclosure of Assets
- Budget Publication
- Publication of Performance Reports
- Environmental Status Report
- Corruption Cases Against Employees

Human Resource

- Adequacy of ULB staff
- Leadership Stability
- Gender Equality
- Average Tenure of Mayor
- Direct Election of Mayor

Participation

- Voter Turnout
- Local Representation
- Community Involvement

Effectiveness

- Citizen Charter
- Establishment Exp per Employee
- Capacity Building
- Presence of Ombudsman

02
METHODOLOGY

The set of 100 indicators that form the Municipal Performance Index are a combination of metrics that have varied nature and specifications. So, a series of steps have to be followed to standardize the data for comparability across the Index. These have been outlined in this section.

City Classification

Since cities across India show wide variations in level of development and population sizes, it was deemed fit to bifurcate them into different tiers for better comparison. The cities will be classified based on population in the following manner.

Classification	Population Range (As per 2011 Census)
Small Towns	Population less than 50,000
Medium Towns	Population ≥ 50,000 < 5 lakh
Large Towns	Population ≥ 5 lakh < 1 million
Metropolitan Cities	Population ≥ 1 million < 5 million
Megapolis	Population ≥ 5 million

Source: URDPFI Guidelines

The first stage of the project will include an analysis of municipalities from all metropolitan and megapolis cities, i.e. all cities with a population greater than 1 million as per 2011 Census, including all the cities covered under the Smart Cities Mission irrespective of their population size. Any learnings gathered from the process will be used to improve upon the existing framework. The study will be later expanded to more cities.

Scoring Methods

The data that is collected for the various indicators across the Index will be obtained in varied units. For instance, vacancy of teachers in municipal schools will be a percentage of the actual staff strength to total sanctioned staff strength while road density will be a ratio of total road length within the municipality to the total municipal area. Each kind of such indicator will have a different scoring mechanism.

Percentage

The data that is collected for the various indicators across the Index will be obtained in varied units. For instance, vacancy of teachers in municipal schools will be a percentage of the actual staff strength to total sanctioned staff strength while road density will be a ratio of total road length within the municipality to the total municipal area. Each kind of such indicator will have a different scoring mechanism.

Ratio

Similarly, to weigh the data for comparability some indicators will be obtained in the form of ratios. For instance, number of digital literacy centres created in a municipality is to be weighed by per lakh of population. Again, these do not require scoring mechanisms but do need to be standardized.

Binary Marking

Some indicators take the form of yes or no questions to the municipalities. For instance, the indicator assessing if the audited accounts of the municipality have been published in the last three years takes a similar form. For such a question, each “yes” answer will result in a marking of 1 and each “no” answer will result in a marking of 0. If a municipality answers “yes” for two years and “no” for the third, it will be awarded a total of 2 marks out of three. Similar scoring will be done across municipalities.

Deviation from Mean

Some indicators have no fixed benchmarking or optimal value. For instance, it is difficult to fix the optimal expenditure on health and education by a municipality. In such cases, the average of all municipalities will be taken as a benchmark and each municipality will be scored based on the deviation from it. For instance, in the case of expenditure on education as a percentage of the total municipality budget, the mean expenditure proportion for all municipalities will be obtained and the deviation of each municipality from it will be used to assess its scores. Any positive deviation will be considered better in such cases.

In some cases, like pupil-teacher ratio, where there is benchmark given by The Right of Children to Free and Compulsory Education (RTE) Act at 30:1, there will be capping at the benchmark. That is, municipalities with higher pupil teacher ratio like 25:1 will be awarded the same score as the one with 30:1. However, those with lower pupil-teacher ratio than 30:1 will be penalised depending on the deviation from the benchmark.

Data Transformation

The indicator set includes some indicators that are positively correlated with the phenomenon that we are trying to capture through the index while some other indicators that are negatively correlated with the overall index. For example, total households covered by piped water connections is positively related with the performance of municipalities while average number of days in which birth and death certificates are issues reflects negatively about the functioning of municipalities. Therefore, the first step is to modify all the indicators in the set in a way that greater value means a higher score.

The table below presents a list of all the indicators that have to be inverted before the calculations.

	Sectors	Indicator	Unit	Numerator	Denominator
Services	Education	Vacancy of Teachers in municipal schools	%	Actual staff strength of teachers in municipal schools	Total sanctioned staff strength of teachers in municipal schools
		Pupil-Teacher Ratio	RATIO	Total number of students in municipal School	Total number of teachers (on roll) in municipal School
	Health	Vacancy of doctors, lab assistants and nursing staff in municipal hospitals		Actual staff strength of doctors, nurses and lab assistants in municipal hospitals	Total sanctioned staff strength doctors, nurses and lab assistants in municipal hospitals

	Sectors	Indicator	Unit	Numerator	Denominator
Services	 Registrations and Permits	Registration Efficiency: a. Birth certificates b. Death certificates	SCORES	Average number of days in which (a) birth and (b) death certificates are issued (application to issue date)	-
		Ease of obtaining permits	SCORES	Average number of days in which building, and construction permits are issued (application to issue date)	-
Finance	 Revenue Management	Tax Revenue Vs Total Own Revenue (three-year average)	%	Tax Revenue of your ULB (in Rupees)	Total Own Revenue of your ULB (in Rupees)
Planning	 Plan Enforcement	Plan Violations	RATIO	Plan Violations	Total plans sanctioned
		Land under encroachment	%	ULB land under encroachment (acres)	Total municipality (area)
Governance	 Transparency and Accountability	Number of municipal employees charged under corruption cases in the last year	%	Number of municipal employees charged under corruption cases in the last year	Total municipal employees
	 Human Resource	Leadership Stability	SCORES	Number of Commissioners in the last five years	

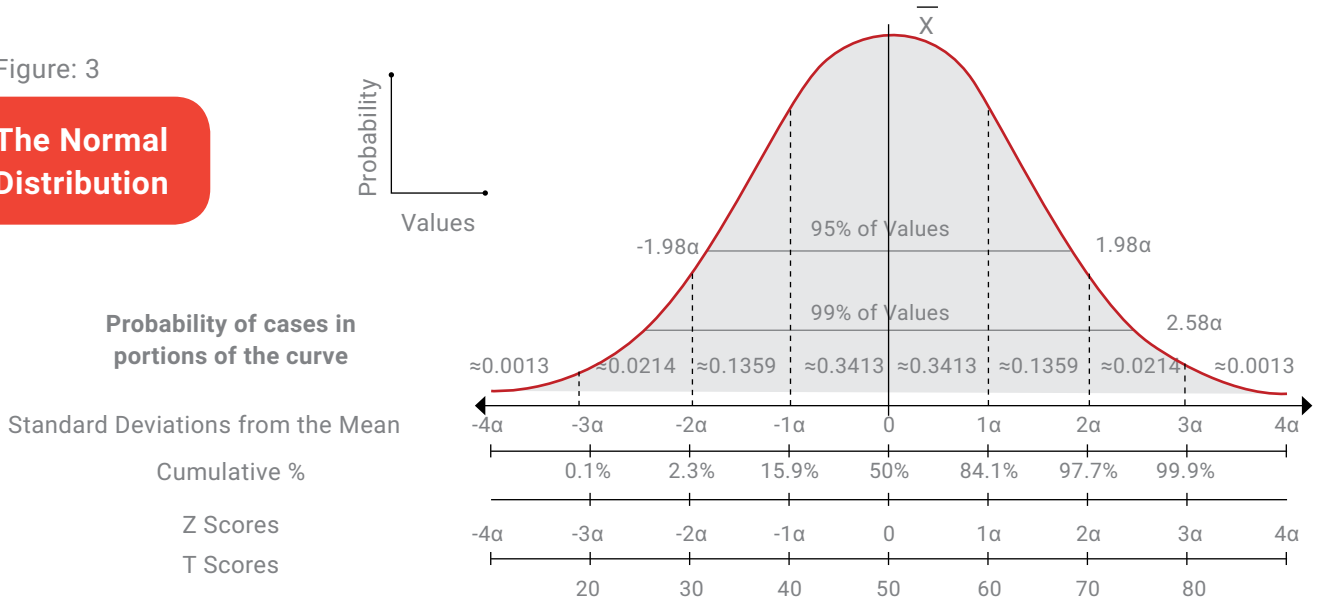
Normalization

It is the step required to make the indicators comparable with each other. It is critical to normalize the data before making any data aggregation as indicators have different units. For example, coverage of sewerage network is captured as a percentage of the total road length while the pupil teacher ratio is a proportion. These indicators are not comparable by any standards. The normalization procedure is carried out to transform the all the data into dimensionless numbers. This is done using z-scores that can be placed in a normal distribution.

The z-score or the standard score indicates how many standard deviations an indicator value is from the mean. It ranges from -3 standard deviation to +3 standard deviation.

Figure: 3

The Normal Distribution



Standardization

Standardization helps solving the problem of non-comparability by making indicators unitless as it rescales them with a mean of zero and standard deviation of one.

It is calculated using the following formula:

$$Z = (X - \mu)/\sigma$$

- Z — Z-score
- X — Indicator value
- μ — Mean
- σ — Standard Deviation

Aggregation

The aggregation methodology of the Municipal Performance Index is based on three elements i.e. indicators, sectors and verticals.

Sector Scores

Each indicator under the sector will be given equal weightage. The sector values are calculated by summing the weighted scores using the following formula:

Sector = ∑ (wi * indicator)

For instance, the sector health has four indicators, so the weight of every indicator for calculating the score for sector health will be 20 percent or 0.2.

This implies that:

Scores of Health = (0.2* Value of number of municipal primary healthcare institutions + 0.2* Value of vacancy of doctors, lab assistants and nursing staff in municipal hospitals + 0.2*Value of deviation of expenditure on healthcare from average + 0.2*Value of number of community healthcare workers)

These scores will be transformed to a 0 to 100 scale. The calculation will be done using the following formula:

$$\frac{\text{(X- Minimum Score)}}{\text{(Maximum Score-Minimum Score)}}$$

X City Score

This sector value is represented by A to T from in the table below

Vertical Scores

The scores of the sectors under each vertical will be aggregated to arrive at the vertical score. This will be calculated using the following formula:

Vertical = ∑ (wi * Category Scores)

The table below presents the weights and the complete methodology for each vertical.

Verticals	Sectors	Score of Verticals
Services (30%)	Education (A) Health (B) Water and Waste Water (C) Wash and SWM (D) Registration and Permits (E) Infrastructure (F)	U = (A+B+C+D+E+F)/6
Finance (20%)	Revenue Management (G) Expenditure Management (H) Fiscal Responsibility (I) Fiscal Decentralisation (J)	V = (G+H+I+J)/4
Technology (15%)	Digital Governance (K) Digital Access (L) Digital Literacy (M)	W = (K+L+M)/3
Urban Planning (15%)	Plan Preparation (N) Plan Implementation (O) Plan Enforcement (P)	X = (N+O+P)/3
Governance (20%)	Transparency and Accountability (Q) Human Resources (R) Participation (S) Effectiveness (T)	Y = (Q+R+S+T)/4

Municipal Index Scores

The municipal index score is weighted average of the scores of all the verticals. This will be calculated using the following formula:

Municipal Index Scores = O.30*U + 0.20*V + 0.15*W + 0.15*X + 0.20*Y

03

INDICATOR
DESCRIPTION

This section carries a detailed description of the 100 indicators under the Municipal Performance Index. Each table outlines the indicator, the vertical and sector that it is under, its numerator and denominator along with its unit.

1.1.1
Vacancy of Teachers in **Municipal Schools**

Vertical	**Sector**
Services	Education

Numerator	Actual staff strength of teachers in municipal schools
Denominator	Total sanctioned staff strength of teachers in municipal schools
Unit	Percentage
Scoring	Lower the better Utopia: Lowest city value

1.1.2
Pupil-Teacher **Ratio**

Vertical	**Sector**
Services	Education

Numerator	Total number of students in municipal schools
Denominator	Total number of teachers (on roll) in municipal schools
Unit	Ratio
Scoring	Relative benchmarking Utopia: 30:1
Comments	As per the Right of Children to Free and Compulsory Education (RTE) Act, 2009, the pupil-teacher ratio should be 30:1 at the primary level. So, 30:1 will be treated as the benchmark and there will be a capping at the figure. That is, municipalities with higher pupil teacher ratio like 25:1 will be awarded the same score as the one with 30:1. However, those with worse pupil-teacher ratio then 30:1 will be penalised for it depending on the deviation from the benchmark.

1.1.3

Deviation of Expenditure on **Education from Average**

Vertical	Sector
Services	Education

Numerator	Expenditure on education by the ULB
Denominator	Total budget of the ULB
Unit	Deviation from Mean
Scoring	Scores based on the deviation from mean expenditure on education
SDG Mapping	1.a.2 Proportion of total government spending on essential services (education, health and social protection)

1.2.1

Number of Municipal **Primary Healthcare Institutions**

Vertical	Sector
Services	Health

Numerator	Number of urban primary health centre (U-PHC)
Denominator	per 60,000 of population
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value
Comments	As per the National Urban Health Mission (NUHM), there needs to be a U-PHC for every fifty to sixty thousand population. So, a relative scoring will be done based on the benchmark and any deviation below it will be penalised.
SDG Mapping	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

1.2.2

Vacancy of Doctors, Lab Assistants and **Nursing Staff in Municipal Hospitals**

Vertical	**Sector**
Services	Health

Numerator	Actual staff strength of doctors, nurses and lab assistants in municipal hospitals
Denominator	Total sanctioned staff strength doctors, nurses and lab assistants in municipal hospitals
Unit	Percentage
Scoring	Lower the better Utopia: Lowest city value
SDG Mapping	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

1.2.3

Deviation of Expenditure on **Healthcare from Average**

Vertical	**Sector**
Services	Health

Numerator	Expenditure on healthcare by the ULB
Denominator	Total budget of the ULB
Unit	Ratio
Scoring	Scores based on the deviation from mean expenditure on health
SDG Mapping	1.a.2 Proportion of total government spending on essential services (education, health and social protection)

1.2.4

Number of Community **Healthcare Workers**

Vertical	Sector
Services	Health

Numerator	Number of community healthcare workers
Denominator	per lakh of population
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value
SDG Mapping	3.c.1 Health worker density and distribution

1.3.1

Total Households Covered **by Piped connection**

Vertical	Sector
Services	Water and Wastewater

Numerator	Total Household covered by piped connection
Denominator	Total number of Households in ULB
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent
SDG Mapping	6.1.1 Proportion of population using safely managed drinking water services 1.4.1 Proportion of population living in households with access to basic services

1.3.2

Deviation of Total Water Supplied **from Service Level Benchmark**

Vertical	**Sector**
Services	Water and Wastewater

Indicator	Total water supplied in litres per capita per day (lpcd)
Benchmark	135 lpcd
Unit	Deviation from Mean
Scoring	Lower the better Utopia: Lowest city value

1.3.3

Number of Households with **Metered Water Supply Connection**

Vertical	**Sector**
Services	Water and Wastewater

Numerator	Total number of households with metered water supply
Denominator	Total number of Households in municipality
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

1.3.4
Amount of **Wastewater Treated**

Vertical	Sector
Services	Water and Wastewater

Numerator	Amount of wastewater treated
Denominator	Total water supplied
Unit	Percentage
Scoring	Higher the better Utopia: 80 percent
Comment	The total amount of waste water generated is approximately 80 percent of the total water supplied. Therefore, utopia is 80 percent.
SDG Mapping	6.3.1 Proportion of wastewater safely treated

1.3.5
Coverage of Storm Water **Drainage Network**

Vertical	Sector
Services	Water and Wastewater

Numerator	Length of storm water drains
Denominator	Total road length
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent
Comment	The length of drains on both side of the roads should not be duplicated. That is, length of drain on both sides of 1 metre long road should be taken as 1 metre and not 2 metres.

1.3.6
Coverage of **Sewerage Network**

Vertical	Sector
Services	Water and Wastewater

Numerator	Length of sewerage network
Denominator	Total road length
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

1.4.1
Percentage Coverage of Area (wards) **Under Door-To-Door Collection System**

Vertical	Sector
Services	SWM and Sanitation

Source	Swachh Survekshan
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

1.4.2

Percentage of Commercial Areas **Undertaking Daily Sweeping and Cleaning**

Vertical	Sector
Services	SWM and Sanitation

Source	Swachh Survekshan
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

1.4.3

Percentage of Collected Waste Transported to **Processing Unit for Disposal within the same day**

Vertical	Sector
Services	SWM and Sanitation

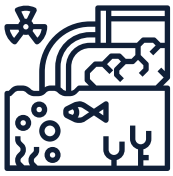
Source	Swachh Survekshan
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent
SDG Mapping	11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities

1.4.4

Percentage of Wet Waste Treated either by **Decentralized or Centralized Planning**

Vertical	**Sector**
Services	SWM and Sanitation

Source	Swachh Survekshan
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent



1.4.5

Total Sewage Treatment **Capacity of the ULB**

Vertical	**Sector**
Services	SWM and Sanitation

Numerator	Total Sewage treatment capacity of the ULB
Denominator	Total sewage generated in the ULB annually
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

1.4.6

Total Number of Households **Connected to Sewerage Network**

Vertical	Sector
Services	SWM and Sanitation

Numerator	Total number of households connected to sewerage network
Denominator	Total number of Households in ULB
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent
SDG Mapping	1.4.1 Proportion of population living in households with access to basic services

1.5.1

Registration Efficiency of **Birth and Death Certificates**

Vertical	Sector
Services	Registrations and Permits

Indicator	Average number of days in which (a) birth and (b) death certificates are issued (application to issue date)
Unit	Number of days
Scoring	Lower the better Utopia: Lowest city value

1.5.2
Online Registration of **Birth and Death Certificates**

Vertical	Sector
Services	Registrations and Permits

Numerator	Number of (a) birth registrations and (b) death registrations completed online
Denominator	Total number of birth and death registration
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

1.5.3
Ease of **Obtaining Permits**

Vertical	Sector
Services	Registrations and Permits

Indicators	Average number of days in which building, and construction permits are issued (application to issue date)
Unit	Number of days
Scoring	Lower the better Utopia: Lowest city value

1.5.4

Online Registrations of **Building and Construction Permits**

Vertical	Sector
Services	Registrations and Permits

Numerator	Number of building and construction permits completed online
Denominator	Total number of building and construction permits issued
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

1.5.5

Number of Licenses **Awarded by the Municipality**

Vertical	Sector
Services	Registrations and Permits

Indicators	Number of licenses awarded by the municipality as per Municipal Corporation Act, 1957
Unit	Number
Scoring	Higher the better Utopia: Highest city value
Comment	For each license, 1 mark will be awarded to the municipality.

1.5.6
Online Application **of Licenses**

Vertical	Sector
Services	Registrations and Permits

Numerator	Number of licenses with online application facility
Denominator	Total number of licenses awarded by the municipality
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

1.6.1
ULB Roads Provided **with Street Lights**

Vertical	Sector
Services	Infrastructure

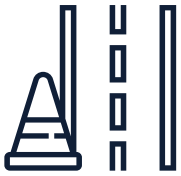
Numerator	Road length of ULB provided with street lights
Denominator	Total road length under ULB operation and maintenance
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent
SDG Mapping	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

1.6.2

ULB Street Lighting **with LED**

Vertical	Sector
Services	Infrastructure

Numerator	Total no. of street light poles with LED under ULB
Denominator	Total no. of street light poles under ULB
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value
SDG Mapping	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all



1.6.3

Expenditure on **Road Maintenance**

Vertical	Sector
Services	Infrastructure

Indicator	Deviation of expenditure on road maintenance (carriage width, footpath, cycle tracks, and on-road parking areas)
Unit	Deviation from Mean
Scoring	Scores based on the deviation from mean expenditure on road maintenance

1.6.4
Road **Density**

Vertical
Services

Sector
Infrastructure

Numerator	Total length of the road
Denominator	Total municipal area
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value

1.6.5
Footpath **Density**

Vertical
Services

Sector
Infrastructure

Numerator	Total length of footpaths
Denominator	Total length of roads
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value
Comment	The length of footpaths on both side of the roads should not be duplicated. That is, length of footpath on both sides of 1 metre long road should be taken as 1 metre and not 2 metres.

1.6.6 Community **Services**

Vertical	**Sector**
Services	Infrastructure

Indicator	Community services a. Community Centre b. Crematorium c. Parks d. Music, dance and drama centre e. Recreational Club f. Care centre for physically /mentally challenged g. Burial grounds/Cremation ground h. Fitness centres/GYM i. Working women – men hostel j. Night Shelter k. Old Age Home l. Orphanage/ Children's Centre
Denominator	per lakh of population
Unit	Ratio
Scoring	Point marking based on each community service Higher the better Utopia: SLB
Scoring	SLB: a. Community Centre: URDPFI Guidelines b. Crematorium: URDPFI Guidelines c. Parks: URDPFI Guidelines d. Music, dance and drama centre: 1 per lakh population e. Recreational Club: 1 per lakh population f. Care centre for physically /mentally challenged: 1 per 10 lakh population g. Burial grounds/Cremation ground: 1 per 5 lakh population h. Fitness centres/GYM: 1 per 5 lakh population i. Working women – men hostel: 1 per lakh 10 population j. Night Shelter: 1 per lakh 10 population k. Old Age Home: 1 per lakh 5 population l. Orphanage/ Children's Centre: 1 per lakh 10 population Data will be capped at these benchmarks and any deviation below it will be penalised.

2.1.1

Own Revenue vs **Total Revenue**

Vertical	Sector
Finance	Revenue Management

Numerator	Own Revenue of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Total revenue of ULB including grants for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Percentage
Scoring	Higher the better
Comment	Own Revenue includes all sources of revenue at the disposal of local government, including property tax, user charges, fees and fines. Own revenue does not include GST compensation devolutions from states to cities. Total own revenue is {All revenue-(grants from centre and states)} The average of last three years will be taken for this indicator for each municipality.

2.1.2

Tax Revenue vs **Total Own Revenue**

Vertical	Sector
Finance	Revenue Management

Numerator	Tax Revenue of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Total Own Revenue of your ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Percentage
Scoring	Lower the better Utopia: Lowest city value

Comment	Own Revenue includes all sources of revenue at the disposal of local government, including property tax, user charges, fees and fines. Own revenue does not include GST compensation devolutions from states to cities. Total own revenue is {All revenue-(grants from centre and states)} The average of last three years will be taken for this indicator for each municipality.

2.1.3

Tax Coverage **Efficiency**

Vertical	Sector
Finance	Revenue Management

Numerator	Number of properties covered under the tax net
Denominator	Total properties within the municipality
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

2.1.4

Properties **Mapped on GIS**

Vertical	Sector
Finance	Revenue Management

Numerator	Total properties mapped on GIS
Denominator	Total properties within the municipality
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

2.1.5
Tax Collection **Efficiency**

Vertical	Sector
Finance	Revenue Management

Numerator	Total amount of property tax collected (out of billed for previous financial year) by ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Total amount of property tax billed by ULB for 2015-16, 2016-17, 2017-18 (in Rupees)
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

2.1.6
Review of **Property Tax**

Vertical	Sector
Finance	Revenue Management

Indicators	Is the municipality mandated to review property tax rates from time to time as per the applicable Municipal Act? (Y/N)
Scoring	Binary Marking

2.1.7
Last Revision **of Taxes**

Vertical	Sector
Finance	Revenue Management

Indicators	If yes, when was the last revision due as per the Act? Has it been carried out? And when?
Scoring	Binary Marking
Comments	A municipality will be awarded 1 mark for each question answered in the affirmative

2.1.8
Accrual Based **Double Entry Accounting System**

Vertical	Sector
Finance	Revenue Management

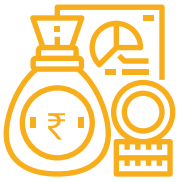
Indicators	Whether Accrual Based Double entry accounting system implemented in your ULB? (Y/N)
Scoring	Binary Marking

2.1.9
Alternate Sources of Financing **Raised by the Municipality**

Vertical
Finance

Sector
Revenue Management

Numerator	Earnings from alternate sources of financing
Denominator	Total earnings of the municipality
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value
Comments	Alternate sources of financing include PPP, Municipality bonds, CSR, Land Monetisation, Open Market Borrowings, Value Capture Finance, External Financing



2.1.10
Budget **Efficiency**

Vertical
Finance

Sector
Revenue Management

Numerator	Actual Revenue of the municipality (Revised Estimates) for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Budgeted Revenue of the municipality for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Difference
Scoring	Higher the better Utopia: Highest city value

2.2.1
Central Grants
Expenditure Efficiency

Vertical
Finance

Sector
Expenditure Management

Numerator	Amount of central grants spent for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Amount of central grants received for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

2.2.2
State Grants
Expenditure Efficiency

Vertical
Finance

Sector
Expenditure Management

Numerator	State Grants Expenditure Efficiency
Denominator	Amount of state grants received for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

2.2.3 Capital Expenditure Vs **Total Expenditure**

Vertical
Finance

Sector
Expenditure Management

Numerator	Total Capital Expenditure of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Total Expenditure of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

2.2.4 Establishment Expenditure Vs **Total Expenditure**

Vertical
Finance

Sector
Expenditure Management

Numerator	Total Establishment Expenditure of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Total Expenditure of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Deviation from Mean
Scoring	Scores based on the deviation from mean city value
Comments	Establishment expenditure is total expenditure of the municipality except capital and operational expenditure.

2.2.5
Salary Expenses Vs **Total Own Revenue**

Vertical
Finance

Sector
Expenditure Management

Numerator	Total Own Revenue of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Salary Expense of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Difference
Scoring	Higher the better Utopia: Highest city value

2.2.6
Preparation of **Budget Estimate**

Vertical
Finance

Sector
Expenditure Management

Indicator	Whether Budget Estimate are being prepared in the last three years? (Y/N)
Scoring	Binary Marking
Comments	A municipality will be awarded 1 mark for each answer in the affirmative

2.2.7
Capital Expenditure **Per Capita**

Vertical
Finance

Sector
Expenditure Management

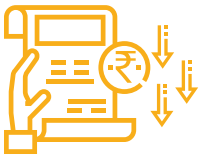
Numerator	Total Capital Expenditure of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Total population of city
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value

2.2.8
Establishment Expenditure **Per Capita**

Vertical
Finance

Sector
Expenditure Management

Numerator	Total Establishment Expenditure of ULB for 2016-17, 2017-18, 2018-19 (in Rupees)
Denominator	Total population of city
Unit	Deviation from Mean
Scoring	Scores based on the deviation from mean city value



2.2.9
Budget
Deficit / Surplus

Vertical	Sector
Finance	Expenditure Management

Indicator	Percentage of Budget Deficit / Surplus for 2016-17, 2017-18, 2018-19 (in Rupees)
Unit	Percentage
Scoring	Lower the better Utopia: Lowest city value

2.3.1
Participatory
Budgeting

Vertical	Sector
Finance	Fiscal Responsibility

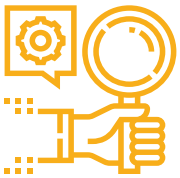
Indicator	Percentage of ULB budget allocated through participatory budgeting (direct citizen inputs)
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

2.3.2 Budget Variance

Vertical
Finance

Sector
Fiscal Responsibility

Numerator	Actual Expenditure
Denominator	Budgeted Expenditure
Unit	Difference
Scoring	Higher the better Utopia: Highest city value
SDG Mapping	16.6.1 Primary government expenditures as a proportion of original approved budget, by sector (or by budget codes or similar)



2.3.3 External Audit

Vertical
Finance

Sector
Fiscal Responsibility

Numerator	Existence of externally audited financial statements for 2016-17, 2017-18, 2018-19 (Y/N)
Scoring	Binary marking Utopia: 3
Comment	Each answer in the affirmative is given a mark of 1

2.3.4 Data **Sharing**

Vertical	Sector
Finance	Fiscal Responsibility

Indicator	Availability of latest data on financial and operational parameters (Y/N)
Scoring	Binary Marking
SDG Mapping	16.10.2 Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information

2.3.5 Internal **Audit**

Vertical	Sector
Finance	Fiscal Responsibility

Numerator	Whether Internal Audits or controls and risk conducted last fiscal or not and presence of such docs (Y/N)
Scoring	Binary marking Utopia: 2 (1 for each question)

2.3.6
Publication of **Audited Accounts**

Vertical	Sector
Finance	Fiscal Responsibility

Numerator	Whether audited accounts (internal and external) have been published for the last three years? (Y/N)
Scoring	Binary marking Utopia: 3
Comment	16.10.2 Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information

2.4.1
Tax Collection **Powers**

Vertical	Sector
Finance	Fiscal Decentralisation

Numerator	Does the municipality have power to set and collect the following revenue sources - property tax, local body tax, professional tax, advertisement rights, entertainment tax and any other? (Y/N)
Scoring	Higher the better (Scores will depend on the number of taxes that municipality can collect) Utopia: Highest city value
Comment	16.10.2 Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information

2.4.2 Borrowing **Powers**

Vertical

Finance

Sector

Fiscal Decentralisation

Numerator	Does it have powers to borrow and invest funds without State approval (including under debt-limitation policies)? (Y/N)
Scoring	Binary marking

2.4.3 Credit **Rating**

Vertical

Finance

Sector

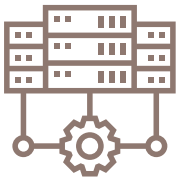
Fiscal Decentralisation

Indicator	What is the credit rating of your municipality?
Scoring	Point marking based on Credit Rating
Comment	There are a total of 20 credit ratings between AAA and D. A credit rating of AAA results in a marking of 20 for a municipality while a rating of D carries a mark of 1

3.1.1
e-Governance **Initiatives**

Vertical	Sector
Technology	Digital Governance

Indicator	Does the ULB have the following e-governance initiatives: a. Web Portal (Y/N) b. Online Public Service Delivery (Services provided online as a proportion of total Services provided) c. Online Public Service Delivery on Mobile (Services provided via mobile as a proportion of total Services provided) d. Online Grievance Redressal (number of grievances received online as a proportion of total grievances received) e. Online Grievance Redressal on Mobile (Services provided via mobile as a proportion of total Services provided)
Unit	Point Marking
Scoring	Higher the better Utopia: 5
Comment	Each question carries a mark of 1. A municipality that answers in the affirmative for the first question will be marked 1; otherwise 0. For the rest, a municipality will receive a mark of 1 if it shows positive deviation from the mean (average of all municipalities); otherwise zero.



3.1.2
Command and **Control System**

Vertical	Sector
Technology	Digital Governance

Indicator	How many of your services are being managed through a command and control system? Eg. SCADA, ICCC etc.
Unit	Point Marking

Scoring	Higher the better Utopia: Highest value
Comment	A municipality will receive a mark of 1 for each service it manages through a command and control system.

3.1.3

Number of Tenders Finalised Through **e-Tendering in the Last Financial Year**

Vertical

Technology

Sector

Digital Governance

Numerator	Total number of tenders finalized through e-tendering in the last financial year
Denominator	Total no of tenders finalized in last financial year
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

3.1.4

Value of Tenders Finalised Through **e-Tendering in the Last Financial Year**

Vertical

Technology

Sector

Digital Governance

Numerator	Total value of tenders finalized through e-tendering in the last financial year
Denominator	Total value of tenders finalized in last financial year
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

3.1.5
Open Data **Policy**

Vertical
Technology

Sector
Digital Governance

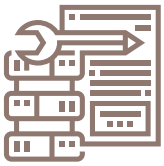
Indicator	Does the city have an open data policy? (Y/N)
Scoring	Binary Marking
SDG Mapping	17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

3.1.6
City Data Officer **(CDO)**

Vertical
Technology

Sector
Digital Governance

Indicator	Has the city appointed a city data officer (CDO)? (Y/N)
Scoring	Binary Marking



3.1.7

City Data **Alliance**

Vertical	Sector
Technology	Digital Governance

Indicator	Has the city formed a city data alliance? (Y/N)
Scoring	Binary Marking
SDG Mapping	17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

3.1.8

Open Data **Portal**

Vertical	Sector
Technology	Digital Governance

Indicator	Does the city have presence on an open data portal? (Y/N)
Scoring	Binary Marking
SDG Mapping	17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

3.2.1
Internet **Access**

Vertical
Technology

Sector
Digital Access

Numerator	Number of Wi-Fi hotspots provided by municipal corporation or smart city company
Denominator	Total Municipal Area
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

3.2.2
Wi-Fi users **Per Hotspot**

Vertical
Technology

Sector
Digital Access

Numerator	Number of Wi-Fi users per hotspot provided by municipal corporation or smart city company (measured by no. of registrations)
Denominator	Total Population
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value
SDG Mapping	17.8.1 Proportion of individuals using the Internet

3.3.1
Digital Literacy **Programmes**

Vertical	Sector
Technology	Digital Literacy

Indicator	Does the municipality run digital literacy programmes? (Y/N)
Scoring	Binary Marking

3.3.2
Number of **Digital Literacy Centres Created**

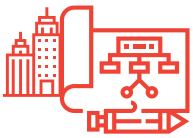
Vertical	Sector
Technology	Digital Literacy

Numerator	Number of digital literacy centres created
Denominator	Per Lakh Population
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value

3.3.3
Digital
Literacy Courses

Vertical	Sector
Technology	Digital Literacy

Numerator	Number of people who have completed digital literacy courses provided by municipality or smart city company
Denominator	Total population in Slums
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value



4.1.1
City
Development Plan

Vertical	Sector
Planning	Plan Preparation

Numerator	Does the city have an updated development plan? (Updated in the last ten years) (Y/N)
Scoring	Binary Marking

4.1.2
Plan on **GIS Platform**

Vertical
Planning

Sector
Plan Preparation

Indicator	Is the current development plan of the city built on a GIS platform? (Y/N)
Scoring	Binary Marking

4.1.3
Planning by **Town Planners**

Vertical
Planning

Sector
Plan Preparation

Indicator	Is the development plan preparation and implementation done by qualified town planners? (Y/N)
Scoring	Binary Marking

4.1.4
Does the MC Follow the **Practice of Local Area Planning?**

Vertical
Planning

Sector
Plan Preparation

Numerator	Has the town planner implemented plan through town planning schemes (TPS schemes)? If yes, then how many were implemented over the last three years?

Scoring	Point Marking Utopia: Highest City Value
Comment	The first question carries 1 mark for answer in the affirmative and the second will receive relative marking

4.2.1
Land-Titling **Law**

Vertical

Planning

Sector

Plan Implementation

Numerator	Does the municipality have a land titling law? (Y/N)
Scoring	Binary Marking

4.2.2
Land-Pooling **Law**

Vertical

Planning

Sector

Plan Implementation

Numerator	Does the municipality have a land pooling law? (Y/N)
Scoring	Binary Marking

4.2.3

Single-Window **Clearance**

Vertical	Sector
Planning	Plan Implementation

Numerator	Is there a single-window clearance in place for building and construction projects (that take affirmative action like affordable housing)? (Y/N)
Scoring	Binary Marking

4.2.4

Does the City Incentivise **Green Buildings?**

Vertical	Sector
Planning	Plan Implementation

Numerator	Does the city incentivise green buildings? (Y/N)
Scoring	Binary Marking

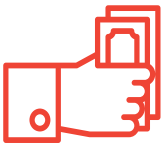
4.3.1

Plan **Violations**

Vertical	Sector
Planning	Plan Enforcement

Numerator	Number of plan violations

Denominator	Total plans sanctioned
Unit	Ratio
Scoring	Lower the better Utopia: Lowest city value



4.3.2
Penalty **Efficiency**

Vertical

Planning

Sector

Plan Enforcement

Numerator	Value of penalties levied on plan violations
Denominator	Violations detected in the last year
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value

4.3.3
Land under **Encroachment**

Vertical

Planning

Sector

Plan Enforcement

Numerator	ULB land under encroachment (Acres)
Denominator	Total municipality area
Unit	Percentage
Scoring	Lower the better Utopia: Lowest city value

5.1.1 Disclosure of **Assets**

Vertical	Sector
Governance	Transparency and Accountability

Numerator	Are the elected and government officials mandated to disclose their income and assets? (Y/N)
Scoring	Binary Marking

5.1.2 Budget **Publication**

Vertical	Sector
Governance	Transparency and Accountability

Numerator	Has the municipality published its budgets and accounts in the last three years? (Y/N)
Scoring	Point Marking Utopia: 3 (1 for each year)

5.1.3
Publication of **Performance Reports**

Vertical
Governance

Sector
Transparency and Accountability

Numerator	Are service-level performance reports regularly published publicly by the municipality every year? (Y/N)
Scoring	Binary Marking

5.1.4
Publication of **Environmental Status Report**

Vertical
Governance

Sector
Transparency and Accountability

Numerator	Has the municipality published an environmental status report with action plans for the last three years? (Y/N)
Scoring	Point Marking Utopia: 3 (1 for each year)

5.1.5
Corruption Cases **Against Employees**

Vertical
Governance

Sector
Transparency and Accountability

Numerator	Number of municipal employees charged under corruption cases in the last year

Denominator	Total municipal employees
Unit	Percentage
Scoring	Lower the better Utopia: Lowest city value
SDG Mapping	16.5 Substantially reduce corruption and bribery in all their forms

5.2.1 Adequacy of **ULB Staff**

Vertical

Governance

Sector

Human Resource

Numerator	Actual staff strength of ULB staff
Denominator	Sanctioned staff strength of ULB staff
Unit	Percentage
Scoring	Higher the better Utopia: 100 percent

5.2.2 Gender **Equality**

Vertical

Governance

Sector

Human Resource

Indicator	Percentage of women in municipality workforce
Unit	Deviation from Mean

Scoring	Scores based on the deviation from mean city value
SDG Mapping	5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

5.2.3
Leadership **Stability**

Vertical
Governance

Sector
Human Resource

Numerator	Number of Commissioners in the last five years
Unit	Number
Scoring	Lower the better Utopia: Lowest city value

5.2.4
Average Tenure of Mayor **in the Last Five Years**

Vertical
Governance

Sector
Human Resource

Numerator	Mayor tenures over the last five years
Denominator	Number of mayors over the last five years
Unit	Ratio
Comments	This is another indicator of leadership stability. Higher average tenure implies stability.
Scoring	Higher the better Utopia: Highest city value

5.2.5
Is the Mayor **Directly Elected?**

Vertical
Governance

Sector
Human Resource

Indicator	Is the mayor directly elected? (Y/N)
Unit	Binary Marking

5.3.1
Voter **Turnout**

Vertical
Governance

Sector
Participation

Numerator	Number of people who voted in the last municipal elections
Denominator	Number of registered voters in the last municipal elections
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

5.3.2
Local **Representation**

Vertical
Governance

Sector
Participation

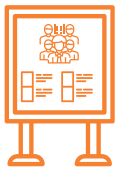
Numerator	Number of local officials elected
Denominator	Per lakh of population
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value

5.3.3
Community **Involvement**

Vertical
Governance

Sector
Participation

Numerator	Number of Municipal Ward Committees formed
Denominator	Total number of wards
Unit	Ratio
Scoring	Higher the better Utopia: Highest city value

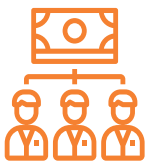


5.4.1
Citizen **Charter**

Vertical
Governance

Sector
Effectiveness

Numerator	Whether ULB has a Citizen Charter? (Y/N)
Scoring	Binary Marking



5.4.2
Establishment Expenditure vs **Total Human Resources**

Vertical
Governance

Sector
Effectiveness

Numerator	Total establishment expenditure of ULB in Rupees in 2018-19
Denominator	Total human resources (including contractual)
Unit	Deviation from Mean
Scoring	Scores based on the deviation from mean city value

5.4.3 Capacity **Building**

Vertical	Sector
Governance	Effectiveness

Numerator	Total staff trained during the year
Denominator	Total staff
Unit	Percentage
Scoring	Higher the better Utopia: Highest city value

5.4.4 Presence of **Ombudsman**

Vertical	Sector
Governance	Effectiveness

Indicator	Is an ombudsman present for service level related queries and grievance redressal (Y/N)
Scoring	Binary Marking

04

APPENDIX

S.No.	INDICATORS	UNIT	NUMERATOR	DENOMINATOR
1. SERVICES				
1.1. EDUCATION				
	Is education as a function performed by the ULB? If Yes	YES OR NO		
1	Vacancy of Teachers in municipal schools	PERCENTAGE	Actual staff strength of teachers in municipal schools	Total sanctioned staff strength of teachers in municipal schools
2	Pupil-Teacher Ratio	RATIO	Total number of students in municipal School	Total number of teachers (on roll) in municipal School
3	Deviation of expenditure on education from average	SCORES	Expenditure on education by the ULB	Total budget of the ULB
1.2. HEALTH				
	Is health as a function performed by the ULB? If Yes	YES OR NO		
4	Number of municipal primary healthcare institutions	RATIO	Number of municipal primary healthcare institutions	per lakh of population
5	Vacancy of doctors, lab assistants and nursing staff in municipal hospitals	PERCENTAGE	Actual staff strength of doctors, nurses and lab assistants in municipal hospitals	Total sanctioned staff strength doctors, nurses and lab assistants in municipal hospitals
6	Deviation of expenditure on healthcare from average	SCORES	Expenditure on healthcare by the ULB	Total budget of the ULB
7	Number of community healthcare workers	RATIO	Number of community healthcare workers	per lakh of population
1.3. WATER AND WASTEWATER				
	Is water supply as a function performed by the ULB? If Yes	YES OR NO		
8	Total Household covered by piped connection	PERCENTAGE	Total Household covered by piped connection	Total number of Households in ULB
9	Deviation of total water supplied from service level benchmark		Total water supplied in lpcd	
10	Number of households with metered water supply connection	PERCENTAGE	Total number of households with metered water supply	Total number of Households in ULB
11	Amount of wastewater treated	PERCENTAGE	Amount of wastewater treated	Total water supplied
12	Coverage of storm water drainage network	PERCENTAGE	Length of storm water drains	Total road length
13	Coverage of sewerage network	PERCENTAGE	Length of sewerage network	Total road length
1.4. SWM AND SANITATION				
14	Garbage Collection: Percentage Coverage of area (wards) under door-to-door collection system	PERCENTAGE	To be taken from Swachh Survekshan scores	
15	Street Cleanliness: Percentage of commercial areas undertaking daily sweeping and cleaning	PERCENTAGE		

16	Waste Disposal: Percentage of collected waste transported to processing unit for disposal within the same day	PERCENTAGE		
17	Waste Treatment: Percentage of wet waste treated either by decentralized or centralized planning?	PERCENTAGE		
18	Total Sewage treatment capacity of the ULB	PERCENTAGE	Total Sewage treatment capacity of the ULB	Total sewage generated in the ULB annually
19	Total number of households connected to sewerage network	PERCENTAGE	Total number of households connected to sewerage network	Total number of Households in ULB
1.5. REGISTRATIONS AND PERMITS				
20	Registration Efficiency: a. Birth certificates b. Death certificates	SCORES	Average number of days in which (a) birth and (b) death certificates are issued (application to issue date)	
21	Online Registration: a. Birth certificate b. Death certificate	PERCENTAGE	Number of (a) birth registrations and (b) death registrations completed online	Total number of birth registrations
22	ase of obtaining permits	SCORES	Average number of days in which building, and construction permits are issued (application to issue date)	
23	Online issuance of building and construction permit registrations	PERCENTAGE	Number of building and construction permits completed online	Total number of building and construction permits issued
24	Number of licenses awarded by the municipality	SCORES		
25	Online Presence of Licenses: Number of licenses with online application facility as a proportion of total licenses awarded by municipality	SCORES		
1.6. REGISTRATIONS AND PERMITS				
26	ULB roads provided with street lights	PERCENTAGE	Road length of ULB provided with street lights	Total road length under ULB operation and maintenance
27	ULB street lighting with LED	PERCENTAGE	Total no. of street light poles with LED under ULB	Total no. of street light poles under ULB
28	Deviation of expenditure on road maintenance (carriage width, footpath, cycle tracks, and on-road parking areas)	SCORES		
29	Road Density	RATIO	Total length of the road	Total municipal area
30	Footpath density	RATIO	Total length of footpaths	Total length of roads
31	Community services a. Community Centre b. Crematorium c. Parks d. Music, dance and drama centre e. Recreational Club f. Care centre for physically / mentallychallenged	SCORES	Number of Community centre Number of Crematorium Number of Parks Number of Music, dance and drama centre Number of Recreational Club Number of Care centre for physically / mentally challenged	per lakh of population

	g. Burial grounds/Cremation ground h. Fitness centres/GYM i. Working women – men hostel j. Night Shelter k. Old Age Home l. Orphanage/ Children's Centre		Number of Burial grounds/Cremation ground Number of Fitness centres/GYM Number of Working women – men hostel Number of Night Shelter Number of Old Age Home Number of Orphanage/ Children's Centre	
2. FINANCE				
2.1. REVENUE MANAGEMENT				
32	Own Revenue Vs Total revenue (three-year average)	PERCENTAGE	Own Revenue of your ULB (in Rupees)	Total revenue of your ULB including grants (in Rupees)
33	Tax Revenue Vs Total Own Revenue (three-year average)	PERCENTAGE	Tax Revenue of your ULB (in Rupees)	Total Own Revenue of your ULB (in Rupees)
34	Tax coverage Efficiency	PERCENTAGE	Number of properties covered under the tax net	Total properties within the municipality
35	Properties mapped on GIS	PERCENTAGE	Total properties mapped on GIS	Total properties
36	Tax Collection Efficiency (three-year average)	PERCENTAGE	Total amount of property tax collected (out of billed for previous financial year) by ULB (in Rupees)	Total amount of property tax billed by ULB in the previous financial year (in Rupees)
37	Is the municipality mandated to review property tax rates from time to time as per the applicable Municipal Act?	YES OR NO		
38	If yes, when was the last revision due as per the Act? Has it been carried out? And when?	POINT MARKING		
39	Accrual Based Double entry accounting system	YES OR NO	Whether Accrual Based Double entry accounting system implemented in your ULB?	
40	Alternate sources of financing raised by ULB (PPP, Municipality bonds, CSR, Land Monetisation, Open Market Borrowings, Value Capture Finance, External Financing)	PERCENTAGE	Earnings from alternate sources of financing	Total earnings
41	Budget Efficiency for the last three years	DIFFERENCE	Actual Revenue (Revised Estimates)	Budgeted Revenue
2.2. EXPENDITURE MANAGEMENT				
42	Central Grants Expenditure Efficiency (three-year average)	PERCENTAGE	Amount of central grants spent	Amount of central grants received
43	State Grants Expenditure Efficiency (three-year average)	PERCENTAGE	Amount of state grants spent	Amount of state grants received
44	Capital Expenditure Vs Total Expenditure (three-year average)	PERCENTAGE	Total Capital Expenditure of your ULB (in Rupees)	Total Expenditure of ULB
45	Establishment Expenditure Vs Total Expenditure (three-year average)	PERCENTAGE	Total Establishment Expenditure of your ULB (in Rupees)	Total Expenditure of ULB
46	Salary Expenses Vs Total Own Revenue (three-year average)	DIFFERENCE	Total Own Revenue of your ULB (in Rupees)	Salary Expense of your ULB (in Rupees)
47	Preparation of Budget Estimate	YES OR NO	Whether Budget Estimate are being prepared in the last three years?	
48	Capital Expenditure per capita	RATIO	Total Capital Expenditure of your ULB (in Rupees)	Total population of city
49	Establishment expenditure per capita	RATIO	Total Establishment Expenditure of your ULB (in Rupees)	Total population of city

50	Budget Deficit / Surplus (three-year)	PERCENTAGE	Percentage of Budget Deficit / Surplus for the last three years	
		2.3. EXPENDITURE MANAGEMENT		
51	Participatory Budgeting	PERCENTAGE	Percentage of ULB budget allocated through participatory budgeting (direct citizen inputs)	
52	Budget Variance	DIFFERENCE	Actual Expenditure	Budgeted Expenditure
53	External Audit (last three years)	YES OR NO	Existence of externally audited financial statements (last three years)	
54	Data Sharing	YES OR NO	Availability of latest data on financial and operational parameters	
55	Internal Audit	YES OR NO	Whether Internal Audits or controls and risk conducted last fiscal or not (and presence of such docs)	
56	Publication of Audited Accounts	YES OR NO	Whether audited accounts (internal and external) have been published for the last three years?	
		2.4. EXPENDITURE MANAGEMENT		
57	Tax Collection Powers	YES OR NO	Does the municipality have power to set and collect the following revenue sources - property tax, local body tax, professional tax, advertisement rights, entertainment tax and any other? (Y/N)	
58	Borrowing Powers	YES OR NO	Does it have powers to borrow and invest funds without State approval (including under debt-limitation policies)?	
59	Credit Rating	SCORES	What is the credit rating of your municipality?	
		3. TECHNOLOGY		
		3.1. DIGITAL GOVERNANCE		
60	Does the ULB have the following e-governance initiatives: a. Web Portal (Y/N) b. Online Public Service Delivery (Services provided online as a proportion of total Services provided) c. Online Public Service Delivery on Mobile (Services provided via mobile as a proportion of total Services provided) d. Online Grievance Redressal (number of grievances received online as a proportion of total grievances received) e. Online Grievance Redressal on Mobile (Services provided via mobile as a proportion of total Services provided)	POINT MARKING		
61	How many of your services are being managed through a command and control system? E.g. SCADA, ICCC etc.	POINT MARKING	How many of your services are being managed through a command and control system out of water, wastewater, traffic management, streetlights, environmental pollution, flood monitoring, grievance redressal, SWM, revenue collection, MIS?	
62	Number of tenders finalized through e-tendering in the last financial year	PERCENTAGE	Total number of tenders finalized through e-tendering in the last financial year	Total no of tenders finalized in last financial year
63	Value of tenders finalized through e-tendering in the last financial year	PERCENTAGE	Total value of tenders finalized through e-tendering in the last financial year	Total value of tenders finalized in last financial year
64	Does the city have an open data policy?	YES OR NO	Does the city have an open data policy?	
65	Has the city appointed a city data officer (CDO)?	YES OR NO	Has the city appointed a city data officer (CDO)?	

66	Has the city formed a city data alliance?	YES OR NO	Has the city formed a city data alliance?	
67	Does the city have presence on an open data portal?	YES OR NO	Does the city have presence on an open data portal?	
		3.2. DIGITAL ACCESS		
68	Internet Access	PERCENTAGE	Number of Wi-Fi hotspots provided by municipal corporation or smart city company	Total municipal area
69	Average number of Wi-Fi users per hotspot provided by municipal corporation or smart city company	PERCENTAGE	Number of Wi-Fi users per hotspot provided by municipal corporation or smart city company (measured by no. of registrations)	Total population
		3.3. DIGITAL LITERACY		
70	Does the municipality run digital literacy programmes?	YES OR NO	Does the municipality run digital literacy programmes?	
71	Number of digital literacy centres created	RATIO	Number of digital literacy centres created	per lakh of population
72	Number of people who have completed digital literacy courses provided by municipality or smart city company as a percentage of total population in slums	PERCENTAGE	Number of people who have completed digital literacy courses provided by municipality or smart city company	Total population in slums
		4. PLANNING		
		4.1. PLAN PREPERATION		
73	Does the city have an updated development plan? (Updated in the last ten years)	YES OR NO	Master plan/City Development Plan made or not	
74	Is the current development plan of the city built on a GIS platform?	YES OR NO		
75	Is the development plan preparation and implementation done by qualified town planners?	YES OR NO		
76	Does the MC follow the practice of local area planning? Has the town planner implemented plan through town planning schemes (TPS schemes)? If yes, then how many were implemented over the last three years?	POINT MARKING		
		4.2. PLAN IMPLEMENTATION		
77	Land-Titling Law	YES OR NO	Does the municipality have a land titling law?	
78	Land-Pooling Law	YES OR NO	Does the municipality have a land pooling law?	
79	Single-Window Clearance	YES OR NO	Is there a single-window clearance in place for building and construction projects (that take affirmative action like affordable housing)?	
80	Does the city incentivise green buildings?	YES OR NO		
		4.3. PLAN ENFORCEMENT		
81	Plan Violations	RATIO	Plan violations	Total plans sanctioned
82	Penalty Efficiency	RATIO	Penalties levied on plan violations	Violations detected in the last year
83	Land under encroachment	PERCENTAGE	ULB land under encroachment (Acres)	Total municipality area
		5. GOVERNANCE		
		5.1. TRANSPARENCY AND ACCOUNTABILITY		
84	Disclosure of Assets	YES OR NO	Are the elected and government officials mandated to disclose their income and assets?	

85	Budget Publication	YES OR NO	Has the municipality published its budgets and accounts in the last three years?	
86	Publication of Performance Reports	YES OR NO	Are service-level performance reports regularly published publicly by the municipality every year?	
87	Published of environmental status report	YES OR NO	Has the municipality published an environmental status report with action plans for the last three years	
88	Number of municipal employees charged under corruption cases in the last year	PERCENTAGE	Number of municipal employees charged under corruption cases in the last year	Total municipal employees
5.2. HUMAN RESOURCE				
89	Adequacy of ULB staff	PERCENTAGE	Actual staff strength	Sanctioned staff strength
90	Gender Equality	SCORES	Deviation of the percentage of women in municipality workforce from the norm	
91	Leadership Stability	SCORES	Number of Commissioners in the last five years	
92	Average tenure of mayor in the last five years	SCORES	Mayor tenures over the last five years	
93	Is the mayor directly elected?	YES OR NO		
5.3. PARTICIPATION				
94	Voter Turnout: Voter turnout in municipal elections	PERCENTAGE		
95	Local Representation	RATIO	Number of local officials elected	per lakh of population
96	Community Involvement	RATIO	Number of Municipal Ward Committees formed	Total number of wards
5.4. EFFECTIVENESS				
97	Citizen Charter	YES OR NO	Whether ULB has a Citizen Charter?	
98	Establishment Expenditure vs Total Human Resources	VALUE	Total establishment expenditure of ULB in Rupees in last financial Year	Total human resources (including contractual)
99	Capacity building	PERCENTAGE	Total staff trained during the year	Total staff
100	Presence of Ombudsman	YES OR NO	Presence of an ombudsman for service level related queries and grievance redressal	

Ministry of Housing and Urban Affairs
Government of India