INFANT, TODDLER, CAREGIVER FRIENDLY NEIGHBOURHOOD 2.0

EVALUATION AND MONITORING METRICS

Nurturing Neighbourhoods Challenge

Ministry of Housing and Urban Affairs
Government of India

Smart City
MISSION TRANSFORM-NATION

The Ministry of Housing and Urban Affairs is the apex authority of Government of India to formulate policies, coordinate the activities of various Central Ministries, State Governments and other nodal authorities and monitor programmes related to issues of housing and urban affairs in the country. The Smart Cities Mission was launched by the Ministry in 2015 to promote sustainable and inclusive cities that provide core infrastructure and give decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions.

http://mohua.gov.in/

URBAN 95

Van Leer
FOUNDATION

Founded in 1949, the Van Leer Foundation (VLF) is a private foundation focused on developing and sharing knowledge about what works in early childhood development. It provides financial support and expertise to partners in government, civil society and business to help test and scale effective services for young children and families. Urban95 is the Van Leer Foundation's 30 million euro initiative to make lasting change in the landscapes and opportunities that shape the crucial first five years of children's lives. VLF has supported programs in India since 1992.

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BDP.

Founded in 1961, BDP is one of the largest interdisciplinary design led firm in Europe and has won over 750 awards for design quality from international and national bodies. BDP established a studio in India in 2010, and has worked on projects at every scale, from city masterplans to detailed public realm design; from concept through to delivery. BDP brings skills involved in the design of great spaces and environments into a single, managed service. The team in Delhi provides masterplanning, urbanism, architecture and landscape design services with access to the combined expertise of all of BDP professionals worldwide.

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WRI INDIA

India Resources Trust, an independent charity referred to as "WRI India", provides objective information and practical proposals to foster environmentally sound and socially equitable development. Our work focuses on building sustainable and livable cities and working towards a low carbon economy. Through research, analysis, and recommendations, WRI India puts ideas into action to build transformative solutions to protect the earth, promote livelihoods, and enhance human well-being. We are inspired by World Resources Institute (WRI), a global research organisation.

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Nurturing
Neighbourhoods
Challenge

The Nurturing Neighbourhoods Challenge is hosted by the Smart Cities Mission, Ministry of Housing and Urban Affairs, Government of India, in collaboration with Van Leer Foundation and with the technical support of WRI India. This Challenge aims to incorporate a focus on neighbourhood-level improvements that promote healthy early childhood development (0-5-year-old children) in the planning and management of Indian cities.

https://smartnet.niua.org/nurturing-neighbourhoods-challenge/web/

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01 Evaluation Metrics

The following document provides guidance on metrics for evaluating progress toward ITCN objectives. The ITCN Evaluation Metrics are elaborated here as a list of key Service Level Benchmarks, and a parallel dashboard tool which offers authorities accurate and simplified comparison across all 100 Smart Indian cities.

THE IMPORTANCE OF EVALUATION METRICS

Taking data seriously can lead to better decisions and more effective actions by simplifying, clarifying and making aggregated information available to policy makers. Evaluation metrics can help to incorporate scientific research into evidence-based decision-making. They can help to measure performance and calibrate progress, and can illuminate lessons learnt and reassess priorities through review. They can provide an early warning to prevent economic, social and environmental setbacks. They are also useful tools to communicate ideas and values providing shared and common objectives for different agencies to work towards.

Evaluation metrics measure aspects of the city that influence the daily lives of infants, toddlers, and caregivers and give an overview for comparison between cities. Since the ITCN is an emerging concept in India, it is crucial to assess and review the effects of interventions.

This document contains a set 70 indicators at various levels that officials can use to measure overall scenario for ITC needs at each level. The indicator set was created through a process of literature review, expert input from the fields of urban management and early childhood development, and a peer-review feedback cycle. The key features of the indicator list are:

- To provide a comprehensive view of the conditions of the city and neighbourhood spaces, and services pertinent to ITCs
- To be economical in length: offering the essential data needed to make sound decisions for ITCs
- Divided into a two-level hierarchy of “core” and “supporting” offering guidance on where and what to prioritise in gathering data

The scenario of ITCs depends on several factors that contribute to their overall wellbeing. These factors have varied distribution over the city area owing to involvement of multiple departments in the maintenance of city services and amenities. Collecting ITC data at various levels coupled with various analyses such as spatial visualisation and analysis facilitates understanding the relationships between factors, and to identify imbalances and patterns leading to effective intervention.

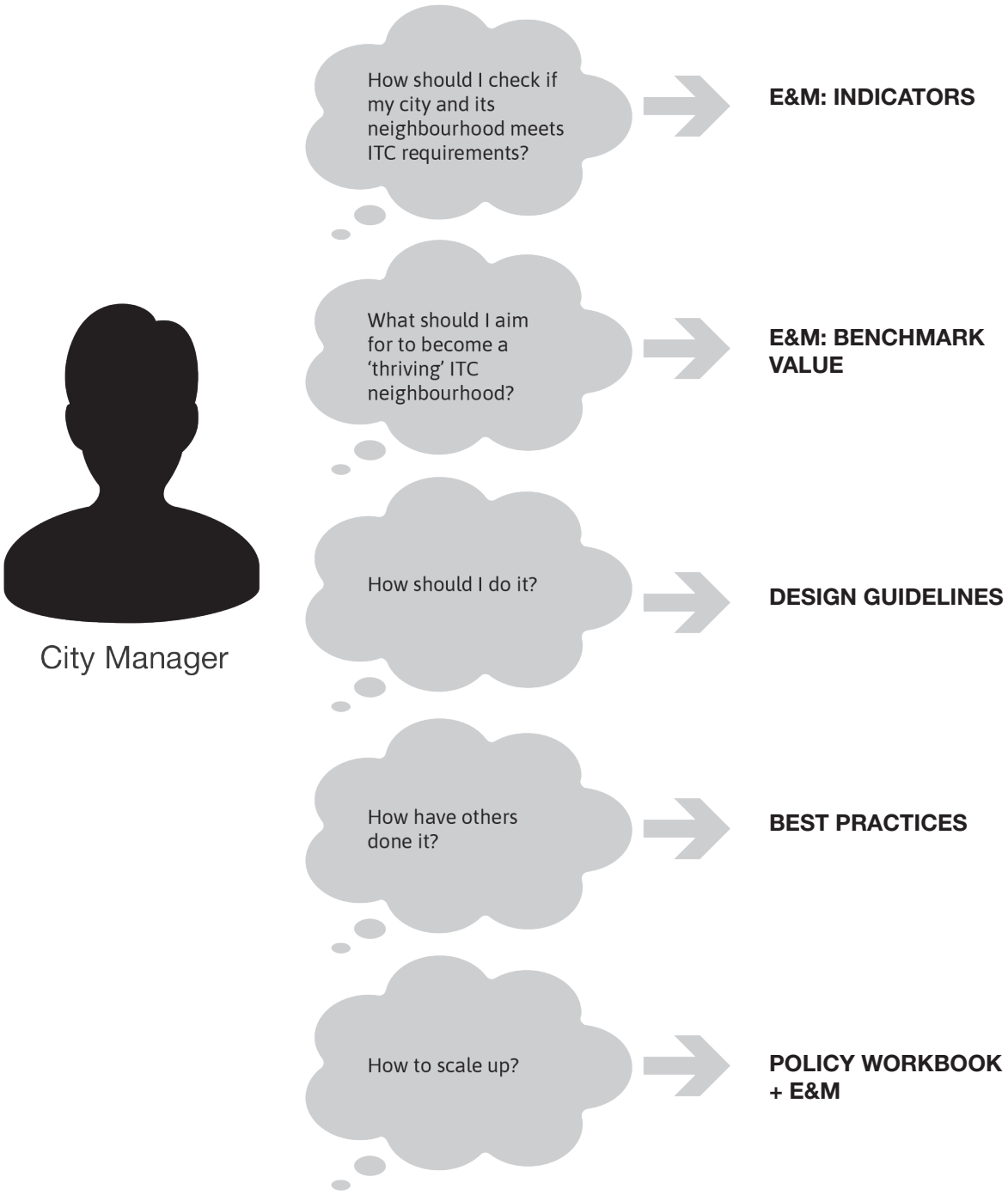

Figure 2.1 ITCN Indicators and the decision making process

HOW TO READ THIS DOCUMENT

This document elaborates the process of evaluation and monitoring of a city and it's neighbourhoods keeping ITCs in perspective. The document is divided in three sections to make it easy as a reference guide for policymakers. The first section of the document introduces the reader to various aspects of data collection, its quality and analysis with the ITCN indicators at various levels ranging from policymaking to on ground implementation. To better evaluate the aspects at each level, the indicators are clustered in three groups namely- (a) Behaviour Change Indicators; (b) City level indicators; and (c) Neighbourhood level indicators. The second section of the document introduces the methodology to evaluate the ITC scenario using various analysis method and tools

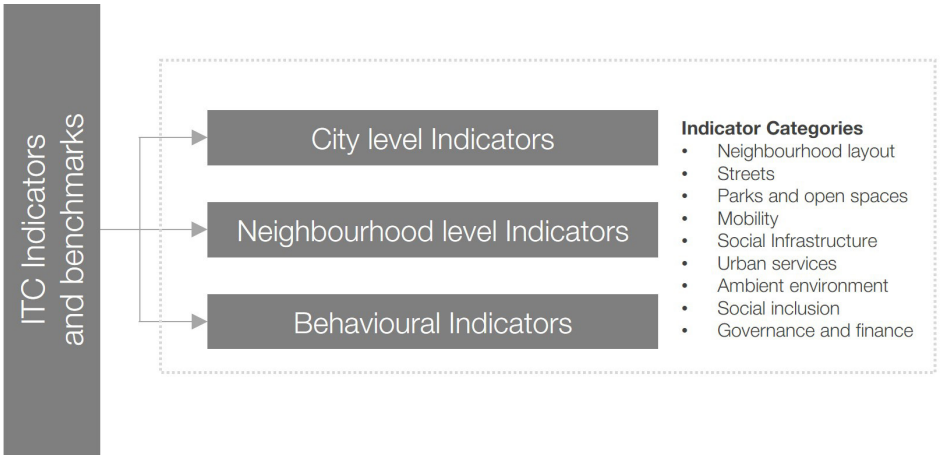

Figure 2.2 Indicator scheme

including spatial analysis. This section highlights the importance and application of various analysis methods. The third section details the indicators, its rationale and benchmark values that are basis for evaluation. The document concludes with annexures to guide on activities that should be carried out to achieve service level benchmarks, key outputs and minimum dataset requirements. This document is cross-referenced to various other publications that are cited for reference and should be referred by the reader for comprehensive understanding of the process.

FROM MEASUREMENT TO MANAGEMENT

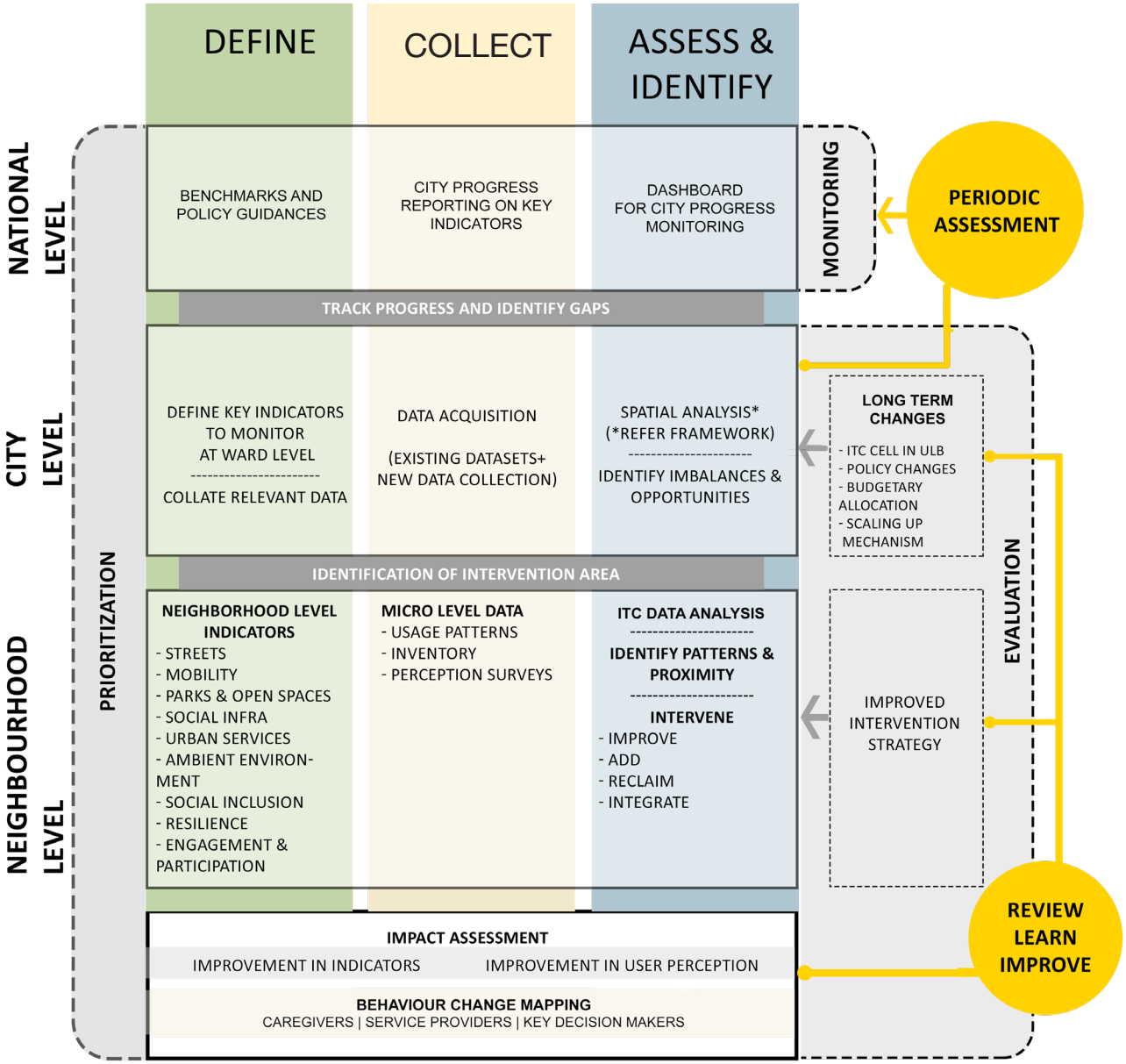

Figure 2.3 Measurement to management process diagram

FROM MEASUREMENT TO MANAGEMENT

The evaluation metrics support a cyclical process of assessment, reviews, learning and improvement. The evaluation should be carried out at each hierarchal level, namely: National, City and Neighbourhood. The National level evaluation aims to monitor the scenario as a whole. The City and the Neighbourhood level evaluation provides guidance on identifying areas of the city to pay attention to and focus on specific components of the neighbourhood to improve within the identified area.

The evaluation metrics are made up of four interrelated parts; data indicators, service level benchmarks, data analysis and an ITC dashboard.

Data indicators - Data indicators are identified for each objective at the neighbourhood level. They contribute to the evidence base at hand for city managers and support a clear understanding of the needs and challenges facing ITCs. The indicators measure the spatial components that influence ITCs experience of the neighbourhood and therefore their overall wellbeing. By providing a measured overview, they signal priorities for decisions and actions.

Service Level Benchmarks - Service level benchmarks measure the performance of cities in achieving ITC objectives. They provide a clear score of how effective decisions and actions have been, ranging from Thriving (high) to Striving (average) to Surviving (low). Measuring performance in this way enables progress to be calibrated and monitored across projects and over time.

Data Collection and Analysis - The data points are components for calculation of the key indicators. The data is generated by day to day operations and reporting by the city administration. Careful data collection and its normalisation is crucial in analysis of the data and extraction of relevant insights. Non-spatial data points can be coupled with spatial datasets to understand their spatial distribution over the city. With effective visualisations, data becomes an effective tool in decision making.

ITC Dashboard - The ITC dashboard moves measurements into management by providing a visual and comprehensive comparison of performance between cities and over time. It includes implementation progress, project types, delivery timescales for different priorities, and an overview of objectives met and benchmark scores. The ITC Dashboard supports the review process of the cities centrally by aiding priority management and informing delivery decisions.

Data-driven decision making and governance - The four components of evaluation metrics provide city administrations with tools to make data-driven decisions. Such data-driven decisions rely on comprehensive datasets, effective evaluation and visual representation of the ITC scenario. The process allows for better governance of the city infrastructure and services with the help of simplified key indicator-based dashboards for city managers. Continued use of the data-driven decision making strategy generates time series datasets to track the impact and make necessary changes in the policies.

WHERE DOES ITCN DATA COME FROM?

The Service Level Benchmarks for ITCs have been developed based on guidance in the Ministry of Urban Development Handbook on Service Level Benchmarks for Urban Transport at a Glance. They also align with existing requirements such as URDPFI, IRC, and Urban Greening guidelines, clarifying the relevance of such guidelines to ITCs and strengthening their role in policy making and project delivery.

The indicators should be considered alongside other evidence, projects and programmes, particularly relating to health and wellbeing, in order to understand the effect of those changes on ITCs and the wider population. In order to optimise decisions and projects for ITCs, further interpretation and analysis would be required appropriate to context. For example, the reasons that infants, toddlers, and caregivers spend time in a particular space, or the specific interactions and compromises at work in a local context.

The Ministry of Housing and Urban Affairs (MoHUA) has been pursuing a bouquet of projects and initiatives to transform the country's economy and society with the objective of having in place, a system of data-driven governance, which truly empowers cities to plan their decisions in real time by being fully aware of the complex interplay between various sectors. The indexes and projects aim to assess the cities across the pillars of quality of life, sustainability, economic ability, climate change and disaster responses, municipal performance, health and wellbeing. The data repository from these initiatives includes data from various verticals: Education, Health, Housing and Shelter, Water, Sanitation and Hygiene (WASH), Solid Waste Management (SWM), Mobility, Safety and Security, Recreation, Economic Development, Economic Opportunities, Gini coefficient, Environment, Green spaces and building, Energy Consumption and City Resilience.

Reference sources include the following –

- Ease of Living Index, 2019
- Municipal Performance Index, 2019
- Climate Smart cities, 2020
- AMRUT
- Swachh Bharat Mission and Swachhta survekshan
- PMAY

Additional data on ITC allied aspects can also be curated from other open and consistent data sources such as, Census of India 2011, National Crime Records Bureau, Ministry of Statistics and Program Implementation, Ministry of women and child development, and Integrated Child Development Services dashboards.

Focusing on indicators of data that already exist can also mean attention is concentrated on phenomena that can be measured more readily – which may not necessarily be those that are most beneficial for ITCs. Particularly for marginalised and vulnerable groups, and especially at the small scale of the neighbourhood. Policy makers should ensure that indicators which are crucial to understanding ITC wellbeing, but difficult to measure are not excluded from policies and investments.

The results of the scoring require thoughtful interpretation and application to different contexts and projects. Stakeholders should be aware of the intersections and overlaps, and highlight the decisions and compromises that need to be made to deliver projects which on balance, work well for ITCs and the wider population.

There is no direct correlation between improved scores and improved wellbeing for

ITCs, rather a combination of optimal results for ITCs will need to be considered and there will be priorities and compromises depending on the context.

The list of 70 indicators that have been included in this document are based on a review of the fields of urban data management, children's issues in cities, and an expert review panel on the Indian city management context and capacities.

The information provided in the Service Level Benchmarks for ITCs aims to provide city managers with an understanding of the rationale and insights behind their measurement from an ITC perspective. This is an attempt to facilitate the interpretation of the indicator into effective actions. In situations where the data suggested by an indicator is unavailable or difficult to obtain, understanding this rationale could support finding of suitable alternatives.

For each indicator the following information has been provided -

- Indicator title, Definition and Rationale
- Data requirements
- Frequency of measurement
- Jurisdiction of measurement
- Reliability of measurement
- Benchmarks, divided into 3 categories of Surviving, Striving and Thriving

SURVEY AND IMPORTANCE OF QUALITATIVE DATA

While quantitative data provides evidence on numerical statistics that presently exist, qualitative data illustrates how these values manifest in day-to-day life. Qualitative data provides insight into a community's priorities, habits, or beliefs, which dictate how or why people choose to interact with their environment. Since ITCN planning interventions will occur at such a local level, qualitative data methods are necessary to gain insights into young children and caregiver's experiences, behaviours, and views. Methods such as interviews, focus group discussions, participatory learning and action research showcase the complexity of community interactions, help identify future indicators and inform community members at the same time, promoting public engagement.

For instance, gathering information about how and why people use public transportation or send their children to school is essential for the efficacy of a project that deals with improving mobility. Including a qualitative approach for collecting data can show intimate details about the way people choose to get to school and show new factors that could be overlooked when merely using quantitative data collection techniques. Qualitative data also helps to confirm direct and identify indirect health determinants for ITC design.

Additionally, new ITC design interventions will undoubtedly require people to adapt to new routines. City managers need to comprehend the complexities of use that exist in a community to help guide how second and third waves of implementation should be, so that they receive the highest possible public support.

FORMS AND METHODS OF QUALITATIVE DATA GATHERING

Method	Description	Importance of data	How to collect data and considerations
01. Participatory Learning and Action Research	Used to gain an in-depth understanding of a community or situation and is always conducted with the full and active participation of community members. PLA is applied through a range of participatory tools and approaches. It is also a philosophy that emphasises reversals in power relations between communities and outsiders.	Immediately available in a form which can be fed back to and discussed with communities. PLA supports the empowerment and mobilisation of local communities and the people within them, whilst at the same time providing information for outsiders, including project or programme staff.	Participants identify problems together with researchers. Participants collect data based on the identified problems in their community. Enacting similar procedural methods as other methods (observations, focus group discussions/workshops, interviews). Noting the initiative and self-direction from participant interest.
1.a Personal / In-depth interviews	Invest a significant amount of time with each participant employing a conversational format. Interview questions are primarily open-ended and lead to a discovery-oriented approach.	Provides opportunity to explore topics in-depth. Allows interviewer to explain or help clarify questions, increasing the likelihood of useful responses. The purpose is to get detailed information that sheds light on an individual's perspective, experiences, feelings, and the derived meaning about a particular topic or issue.	Pre-established interview questions Record interviews (audio or visual) Data transcription and analysis Flexible – probing questions can be asked, and the order of questions changed, depending on the participant and how structured or unstructured the interview is.
1.b Focus Group Discussions/ Workshops	Qualitative research method Selected group of people discuss a given topic or issue in-depth, facilitated by a professional, external moderator. Aims to obtain data from a purposely selected group of individuals. Form of data comprises of questionnaires, workshop assignments such as diagrams and maps.	Discussion among a diverse group can lead to insights that one would not get from individuals. Large quantities of information in a short amount of time. Produces data unique to group setting (e.g. teasing, arguing and non-verbal behaviour) due to the interaction between participants.	Record (audio or visual), and preferably with other researchers observing and noting interactions or conversations. Identifying values, habits, priorities, or interests from interviews and responses.

Table 2.1 Forms and methods of qualitative data gathering

Method	Description	Importance of data	How to collect data and considerations
1.c Journey Maps	Journey maps are visualisations that represent user experiences to effectively highlight issues (such as organisational, technical) and allow stakeholder groups to be depicted by interest or function for a comparative visual analysis. Journey maps illustrate the experience pathway or "journey" of a persona from their individual perspective and allow us to highlight pain points (e.g. challenges, barriers, or friction) and opportunities for intervention.	Helps in empathising with the audience. Gives an overview of audience's environment/ situation.	Map of the neighbourhood with annotations from the participants. By mapping movement and activity pattern of target users, marking their pause points, challenges and barriers, and opportunities.
02. Observations	Qualitative and non-experimental studies that seek to systematically observe, record, and analyse a particular society, culture, behaviours and attitudes. Observations help in identifying commonalities and differences between separate individuals who navigate the same space.	Provide direct information about behaviour of individuals/groups. Observational research is relatively in-expensive to conduct, as researchers need minimal resources to conduct their observations Observing a subject within its natural setting can help researchers capture changing attitudes and mobile dynamics of the subject.	Notes are taken on behaviours seen during activity. Data is collected at an appropriate distance away so that the integrity of the information is not compromised. The data is collected in the form of structured notes from a pre-drafted sheet where behaviours and actions are checked off a list.

SIMULTANEOUS SURVEY DATA COLLECTION AND COMMUNITY ENGAGEMENT

It is important to view qualitative data gathering not simply as collecting information for later use, but as an opportunity for building community interest and engagement.

Community engagement will be the driving force behind the success of ITCN design projects. Community investment and ownership in plans are best when started at the beginning. The process of data collection can become stronger and more systematic through Participatory Learning and Action Research. According to Cities Alive: Designing for Urban Childhoods, “Insights and impacts from successful child-friendly interventions should be explored, shared and incentivised, for example through networks, knowledge sharing platforms, study tours, and awards.” This document clearly states that planning for children is most impactful when information is understood by, and available to every department working on ITCN planning and the shared objectives it aims to fulfil.

This message means that there should be a keen awareness of different department databases and design conversations between various departments. It is not only essential to build trust for the fidelity of the project, but it is also necessary to understand the risks involved without public input and engagement. Mistrust, apprehension for change, and feeling blind sided can occur when a limited conversation is engaged.

During the process of knowledge sharing and awareness generation it is important to identify all the key stakeholders impacting the process of making our cities children responsive. As different stakeholders might share diverse understanding on the topic or of the data available in the ecosystem, it is essential to have a systematic framework for identification of stakeholders in the city and a well-established system of engagement tools and exercises.

STAKEHOLDER ANALYSIS AND ENGAGEMENT

Stakeholder mapping and prioritisation:

A stakeholder is anyone who has an interest in or is affected by or influences a project/ initiative/intervention decisions, actions, or outcomes.
Stakeholders can be placed into two broad categories:

- Primary stakeholders - Those who are directly impacted (positively or negatively) by the project.
- Secondary stakeholders - Those who have a stake or interest in the proposed project or are indirectly impacted by the project.

Stakeholder mapping is a process that uncovers the stakeholders who are going to be involved or impacted by the project and then prioritises these stakeholders by determining their level of importance and influence vis-a-vis the project objectives and goal. It allows us to create a clear picture of the different stakeholders, how they will be impacted by our project or interventions, and where project resources need to be focused.

Stakeholder engagement:

Once the stakeholders have been prioritised based on their level of interest and influence on the project/intervention, they need to be involved in different stages of the project cycle, from project identification to formative research, planning, implementation, monitoring and evaluation, and operation and maintenance. Often, stakeholder engagement is limited to a pre-project briefing and post-project dissemination event with the primary objective to convince stakeholders to endorse an initiative that was already formulated.

Stakeholder engagement is a dynamic process that involves building relationships with stakeholders and working collaboratively with them to achieve shared goals. The focus is on active involvement and partnership with stakeholders, rather than just seeking input or feedback. The effort here is to actively map stakeholders, solicit their participation, and work with them to co-create solutions or outcomes that benefit and create value for all stakeholders involved.

Importance of stakeholder consultation:

Engaging and receiving inputs from stakeholders and gatekeepers is critical to the success of a programme. For this it is important to engage stakeholders at critical junctures during the project cycle. A stakeholder consultation can help to:

- Fill information gaps on the problem, audiences and context
- Ensure buy-in of stakeholders so that they do not pose obstacles/challenges
- Develop potential project interventions
- Mobilise resources (human and financial)
- Share project progress and impact (M & E)
- Gain feedback on potential improvement areas

Notes:
For more information kindly refer to the Social and Behaviour Change Toolkit for Child-friendly cities

02 ITC Data Analysis

INTRODUCTION

Cities are complex ecosystems with a plethora of interdependent activities occurring concurrently. Understanding the scenario effectively with data analysis and leveraging it to make informed decisions is critical to better serving the urban population of the country. However, young children and their caregivers are frequently the section of population whose data is not explicitly measured, keeping them deprived of visibility in decision-making. With better data collection and analysis, their needs can be better assessed and provided for, in a more effective way.

Analysis methods

Urban data ranges from broad aspects, such as demographics that indicate the socioeconomic scenario, to micro aspects, such as absolute numbers related to infrastructure. To respond to the situation, decision makers must quickly understand trends, synergies, and anomalies. Defining indicators specific to the desired monitoring aspect helps define the scope and provides a set measure to understand the aspect. Understanding the component datasets for indicators and their interrelationships can point to a suitable analysis method. At a project level, the indicators have simple variations that can be understood using numerical analysis and graphical charts generated using simple statistical analysis. For example, consider the monthly footfall of young children at a park. When we look at the neighbourhood-level and city-level indicators, the data relationships are sensitive to their interconnection with different physical environments and geographical spread, which can be understood better using geospatial analysis. An example is the population of the city with access to parks within walkable distances.

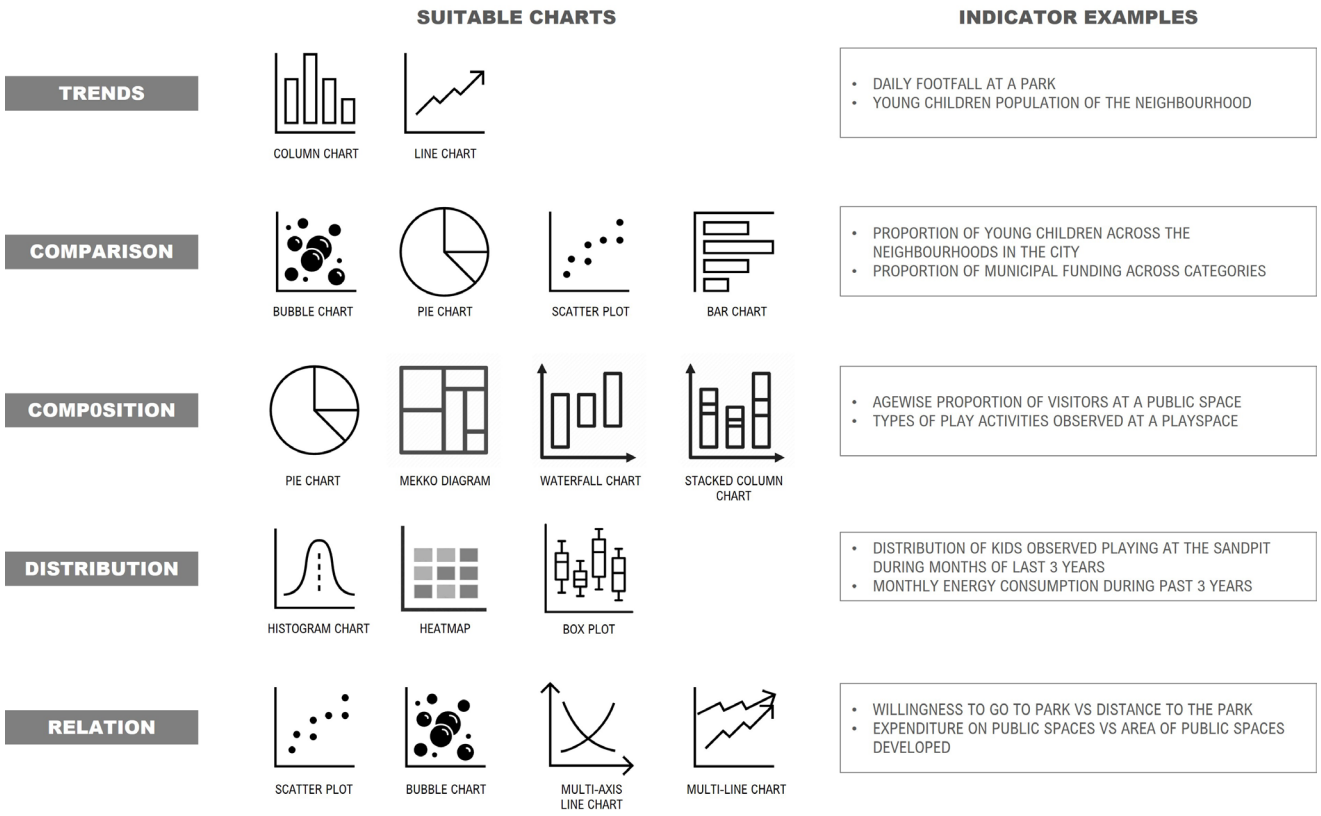

Figure 2.4 Statistical analysis framework

Statistical analysis

Understanding the datasets with statistical analysis usually involves two steps. The first step involves understanding dataset through statistical characteristics, such as averages, minimums, and maximums, and eliminating outliers. The next step usually involves visualising the datasets with the objective of Comparison, Composition, Distribution, identifying trends, or deducing relationships among the data variables. Figure 2.4 provides an indicative guidance on charts that are suitable for each of the objectives.

Geospatial analysis

In the urban context, city leaders often have to focus their decisions with citywide understanding. In such cases, spatial analysis is one of the most effective ways to comprehend complex data relationships as it leverages multiple datasets represented on geolocated layers to gain insights. Cities can use spatial analysis to better understand the geographical relationships between various parameters related to their citizens.

I. Framework

The key indicators identified for understanding the situation of ITC are the guiding points to proceed with the analysis. The key indicators comprise components that help arrive at the final value. These components either are datapoints or indicate towards a datapoint. The components would fall in one of the following aspects – target population, their character, and the physical feature in focus. In case of complex analysis, datapoints from two indicators can be collated. As an example, the city administration is interested in analysing access to play

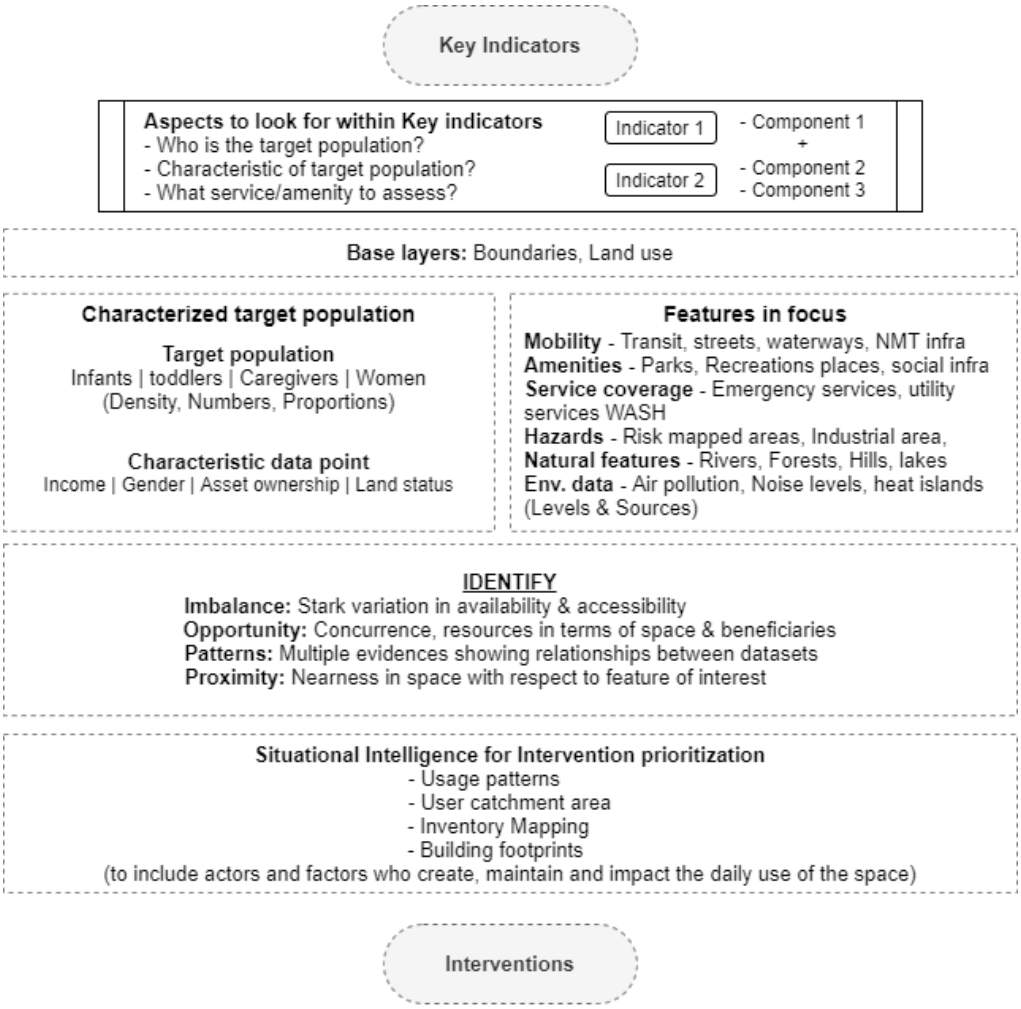

Figure 2.5 Spatial analysis framework

opportunities for children in slums. This can be split into two indicators - child population in slums and access to play areas. In case the indicator components do not indicate the target population, ITC (Infants, toddlers, and caregivers) population should be considered as the target population. With the datapoints and extent guidance, the city can proceed to carry out spatial analysis to understand the scenario and identify imbalances and opportunities. The analysis paves the way for identifying interventions and, subsequently, measure the impact.

II. Steps in Spatial Analysis

(a) Data Preparation: With the reference of data requirement, the existing data availability along with its sources should be enlisted. Additional information regarding the data, such as who collected the data, when was it collected, and the method of data collection, can help in identification of suitability of data. This forms the primary dataset that can be enriched with the latest data collected by various methods, such as recording day-to-day activities, periodical surveys and automated sensor feeds. The data can be classified into spatial as well as non-spatial, based on whether it can be represented geographically or not. However, with several data sources contributing data, it must be translated to common formats with comparable spatial boundaries in order to be analysed. An indicative list of data points and their data sources relevant to ITCs are presented in Figure 2.6.

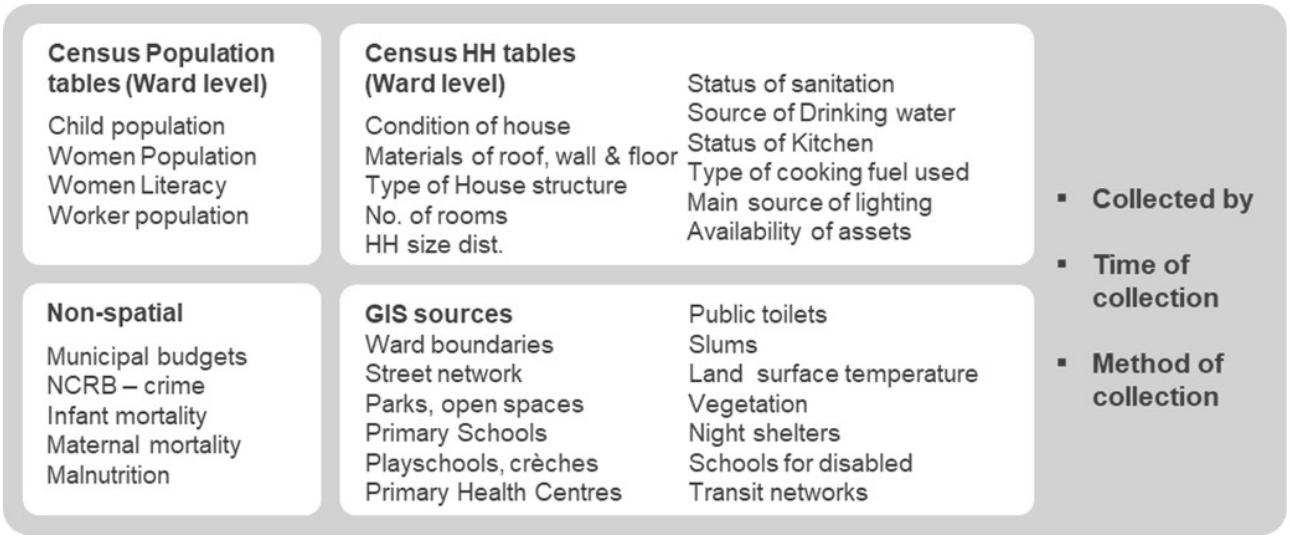

Figure 2.6 Spatial and non-spatial data sources

(b) Data integration: The complexity of the data can be reduced by integrating non-spatial and spatial datasets. Spatial data formats can hold large amount of information as tables, which can be linked through a common attribute. An example of data integration is combining census data with ward boundaries of a city with the help of ward number as a common attribute. Street data can be combined with road speed limits with the help of street number/ID as a common attribute. The integrated dataset offers better understanding of the scenario due to added visualisation options.

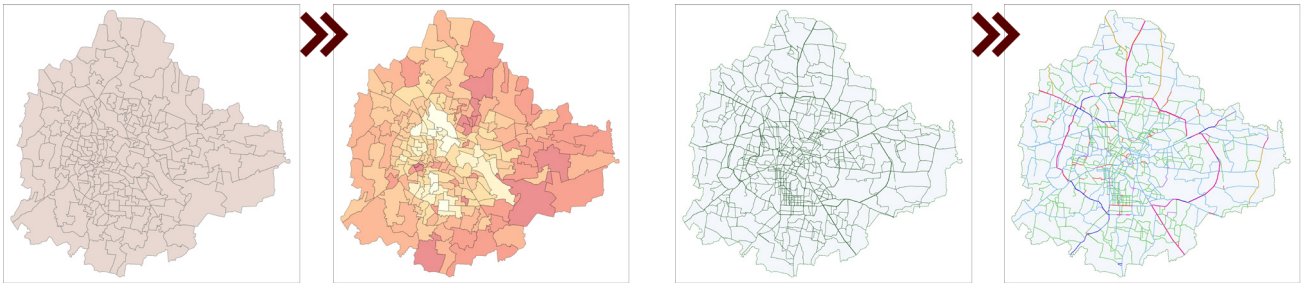

Figure 2.7 Visualisation of non-spatial data by linking with spatial data

(c) Evaluation and solution identification: The integrated data, when visualised with relevant combinations, indicate relationships between demand and supply, co-location, coverage areas, etc. Spatial analysis tools offer multiple ways to assess data relationships. The coverage of a facility or the distance to the nearest amenity can be assessed using network analysis tools whereas the population distribution can be seen with the help of heatmaps or color variations. Combinations of these tools can be used to create striking visualisations that help in quick decision-making. Figure 2.8 illustrates some examples of issue identification, area prioritisation along with intervention development, and monitoring with the help of spatial analysis.

I. Slums

II. Parks and open spaces

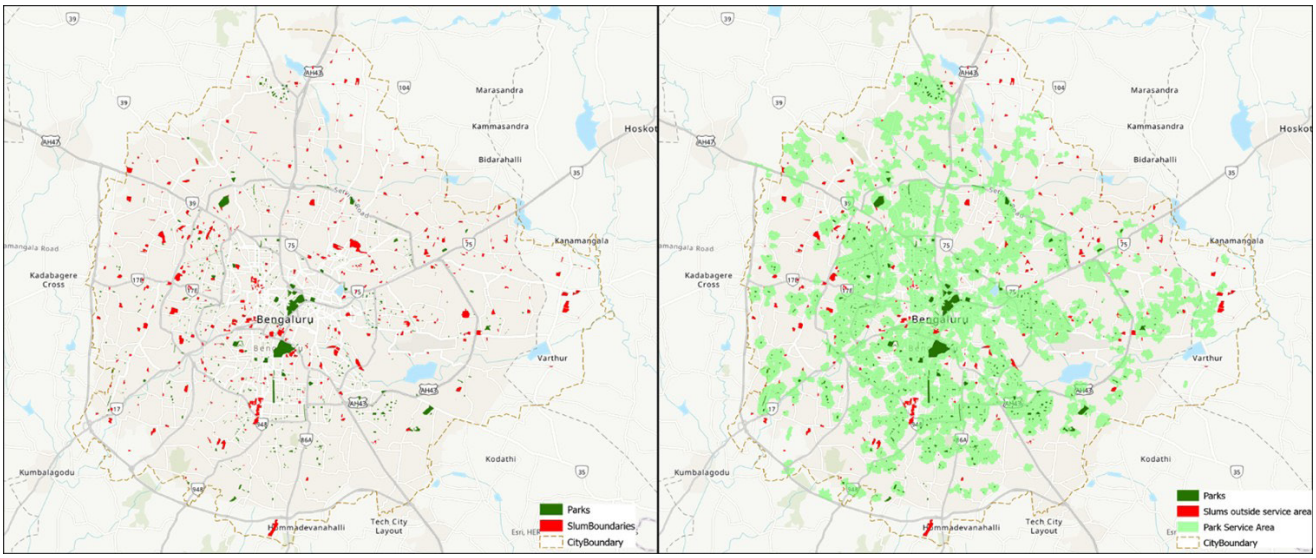

Figure 2.8 Spatial analysis for access to open spaces for slum areas

The areas to target can be identified with the help of spatial visualisations as shown in Figure 2.9. The spatial visualisation in Figure 2.8 shows relationships between two factors.

It can be inferred from the analysis that 62% of the slum areas do not have access to open spaces. The analysis for multiple criteria can be overlaid to understand an aggregated scenario (Refer Figure 2.9). In this case, the provision of parks and open spaces in the areas without coverage, prioritised on the basis of the distribution of child population in the city, would be the intervention strategy. Once the interventions are executed, a similar analysis can be done to measure the improvement in the scenario.

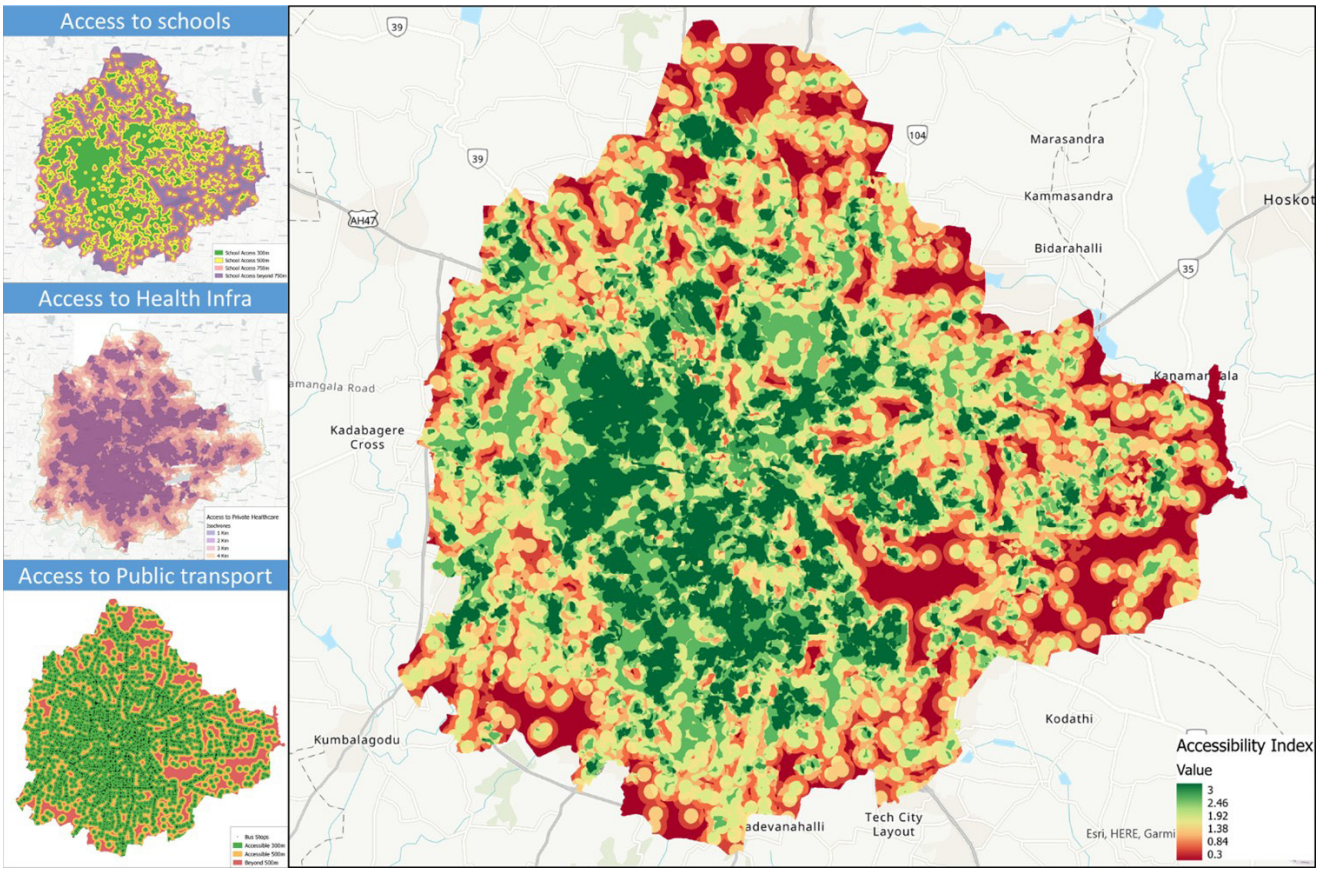

Figure 2.9 Access estimation for schools, health infrastructure and public transport

At the neighbourhood level, usage patterns and individual amenity coverages take precedence in analysis. Figure 2.10 shows a neighbourhood split by a railway track, the service areas for various amenities such as gardens, playschools, Anganwadi centre, primary schools, and play spaces. The polygons with red border represent informal settlements. The streets with high usage pattern are represented with line thickness relevant to its usage in the neighbourhood. The coverage area analysis provides better understanding about the neighbourhood and the underserved areas in the neighbourhood. It can be observed that the western region in the neighbourhood close to the railway tracks does not have access to many amenities. The interventions in the neighbourhood can be developed to improve access for underserved area and find ways to make the neighbourhood self-sufficient.

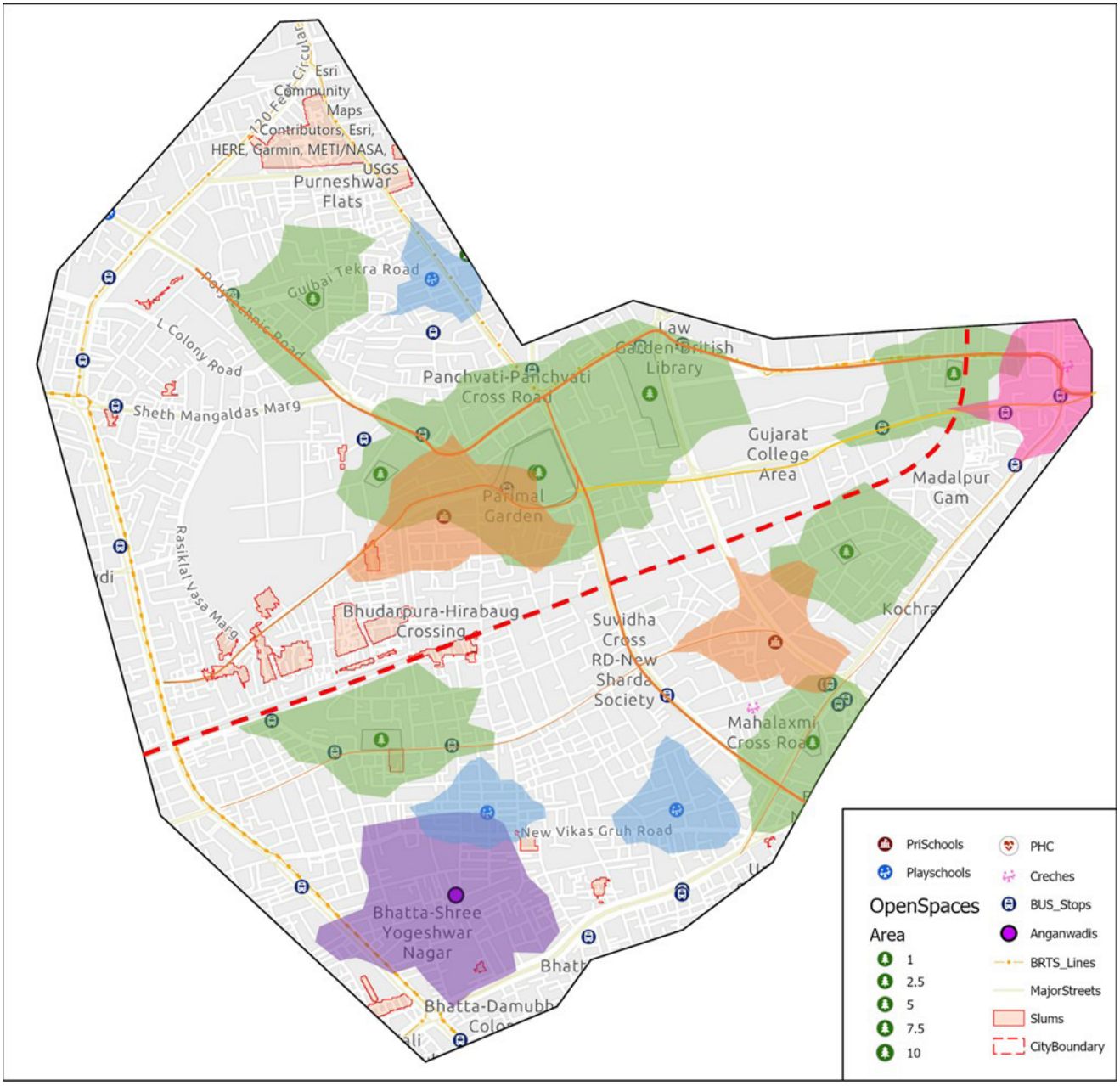

Figure 2.10 Usage patterns and amenity service area analysis at neighbourhood level

INTERPRETING RESULTS: ITC DASHBOARD

The dashboard is a powerful tool through which to deliver information to the public. It visualises change within a city, in a way that is faster to comprehend. It can also provide an interface between the public and the government. The dashboard is not a surrogate for community engagement but, when deployed well, it is an important aspect of a government's commitment to transparency and accountability to its stated goals.

City or neighbourhood dashboards use visual analytics – dynamic and/or interactive graphics (e.g. gauges, arrows, bar charts, graphs), and maps – to display information about the performance, structure, pattern, and trends of cities. The ideal display offers a big-picture view of what is happening in real-time, along with information on historical trends, so that users can understand the "how" and "why", and redirect future action.

The dashboard's utility extends beyond monitoring the current situation. It also allows a city manager to make provisions, and take appropriate actions.

Creating a flexible, interactive platform for the purpose of gauging Smart Cities' progress towards the transformation of Infants, Toddlers and Caregiver-friendly Neighbourhoods (ITCNs), allows us to conceptually transform disaggregated pieces of information into holistic, valuable indicators of the well-being of ITCs.

It is important that dashboards integrate diverse data. However, this is challenging because of various reasons, such as lack of common keys, inconsistent data format, noise, and missing data.

The ITCN dashboard would measure and monitor the performance of the 100 Smart Cities, offering a comparison of progress and performance across 100 cities in India.

The dashboard enables the evaluation of project implementation, including the priorities, milestones, and progress of projects associated with 100 Smart cities across India. It will support the move from performance measurement to performance management by feeding into operational review and central decision-making processes.

The service level benchmarks represent a set of common goals and shared benchmarks that all cities are signed up to and are measured against. The indicated performance can highlight the important value judgements and investment decisions to be made to deliver the across all cities. Tracking progress in this way ensures that stakeholders responsible for delivering results are aware of the milestones and challenges ahead and the interrelated considerations to feed into those decisions.

As the implementation of the Mission progresses, the performance level will improve over time. The dashboard should, therefore, be seen as a dynamic tool. A periodic review of benchmarks, performance indicators, data systems, and priorities should be undertaken as the milestones in Smart City Proposals are implemented and the impact of dashboard-driven management decisions is better understood. The dashboard provides a consistent baseline against which outcomes can be measured and monitored with these periodic review points highlighted.

An annual review of the dashboard would align with data collection and could be programmed with the Apex Committee Mission quarterly monitoring.

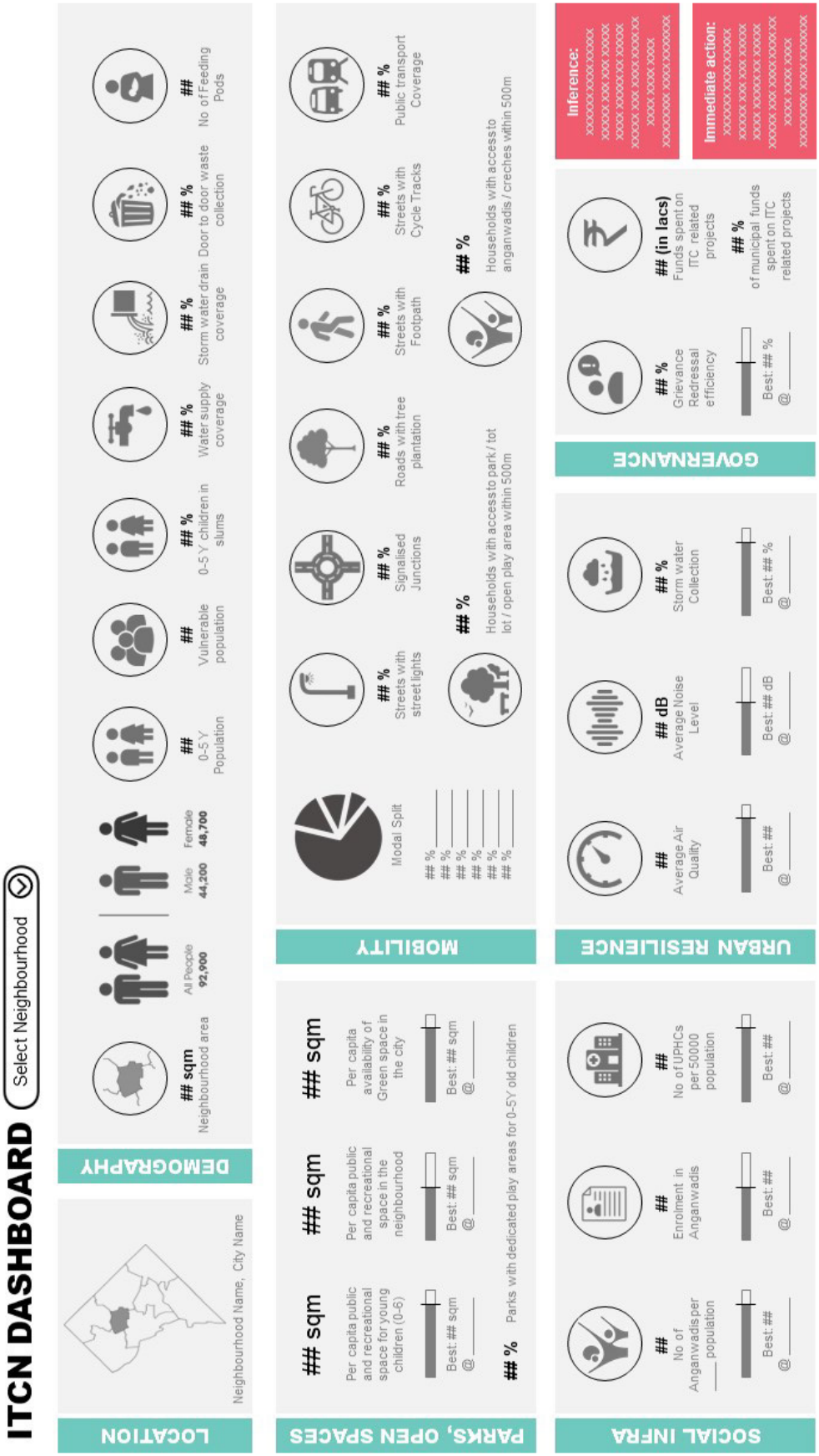

Figure 2.11 Interpreting Results: ITC Dashboard
Note: Dashboard needs to be developed and the above illustrates a generic example of what it would include.

COMPONENTS OF ITC DASHBOARD

The dashboard would:

- **Visualise data to enable effective monitoring across various sectors**
- **Target needs and decision-making by supporting review**
- **Match resources and needs, by informing funding decisions**
- **Build partnerships by supporting engagement**
- **Track and compare performance and progress (between neighbourhoods/ wards and over time)**

The ITCN dashboard emphasises on data at neighbourhood level. The periodic data related to multiple sectors like urban services, parks and open spaces, mobility, social infrastructure and governance will be collected by the ULBs at regular intervals and updated on the dashboard. The performance of a neighbourhood on urban service provision can be assessed based on the existing Service Level Benchmarks (SLBs) by MoHUA. The dashboard provides an opportunity to compare a certain neighbourhood with the best performing neighbourhood across a particular indicator where there are no set standard benchmarks, for example, % of streets with cycle tracks, % of households with access to play areas within 500m. The dynamic dashboard will also provide insights to the ULBs based on the existing scenario and suggest immediate actions for improving it. The insights derived from the dashboard help in identifying and prioritising the issues across various sectors at neighbourhood level and taking informed decisions to resolve them.

For more information on Dashboards, see:

- (PDF) Urban data and city dashboards: Six key issues. Available from: https://www.researchgate.net/publication/307545817_Urban_data_and_city_dashboards_Six_key_issues
  https://placesjournal.org/article/mission-control-a-history-of-the-urban-dashboard/

Companies that make dasboards

- Juice Software
  http://www.juiceanalytics.com/writing/the-future-of-dashboards
- KnowNow, Rapt, Arzoon, ClosedloopSolutions, SeeBeyond, and CrossWorlds

MONITORING AT NATIONAL LEVEL

The urban development decisions originate as a vision at the ministry and passes through many hierarchical levels before getting implemented. For coordinated actions to be taken for improvement of ITC scenario in the country, it is important to influence National level policies to bring about long term, sustainable and systematic changes. National level programmes such as Nurturing Neighbourhoods Challenge can be clubbed with other programs such as Climate Action Plans, Sustainable Development Goals and monitoring those will influence improved ITC-centric holistic development in cities. National level monitoring of ITC scenario provides an overall perspective, to help form improved policies and ensure budgetary allocation for implementation of interventions. To faciliate the same, the DAMU unit of the Ministry of Housing and Urban Affairs has prepared a set of ITC-centric National level data indicators and have incorporated these on an online portal AMPLIFY to understand ITC responsiveness of various cities.

03 ITC Indicators and Service Level Benchmarks

A predetermined set of indicators are proposed for Indian cities, which shall be used for evaluating issues around ITCs in various domains, as compared to the service level benchmarks. These benchmark values have been drawn from SLBs for Urban Transport, URDPFI and similar such Indian guidelines documents. These will primarily help evaluating gaps for ITCs and provide solutions as per on-ground requirements. Post interventions, these indicators shall be used for monitoring the impact of solutions and long-term progress tracking for cities.

ITC indicators are split into two levels – city and neighbourhood. This is based on the level at which each data indicator needs to be collected for evaluation and monitoring. City level indicators are broader, related to coverage or level of service. These should be collected ward-wise to understand uniformity and/or imbalance to identify areas for interventions. These can be collected from multiple existing data sources such as AMRUT, Swachh Bharat Mission, Liveability Index and other similar sources. Neighbourhood level indicators are more qualitative, varying with local context and hence need to be collected at local scale. These will help to develop interventions as they are more precise and may need to be surveyed if not already available.

An example of how indicators for various domains are set at different levels is as given below -

City level indicator - Number of good quality neighbourhood park spaces in the city
Neighbourhood level indicator - % of area in parks dedicated to play spaces suitable for children 0-5 years old

ITC indicators are classified under following domains which directly affect quality of life of ITCs -

1. Neighbourhood layout
2. Streets
3. Parks and open spaces
4. Mobility
5. Social infrastructure
6. Urban services
7. Ambient environment
8. Social inclusion
9. Governance and finance

Table 2.2 Categorised list of city and neighbourhood level indicators

S. No.	Data Indicator title	Benchmark value		
		Thriving	Striving	Surviving
Neighbourhood Layout				
1	Perception of safety for ITCs of key public amenities - streets, parks, play spaces, school, health services etc. (Supporting)	More than 80% caregivers of young children feel safe outside environment around public amenities (streets, parks, play spaces, school, health services etc.)	80 - 50% caregivers of young children feel safe outside environment around public amenities (streets, parks, play spaces, school, health services etc.)	Less than 50% caregivers of young children feel safe outside environment around public amenities (streets, parks, play spaces, school, health services etc.)
2	% of buildings within 300m distance of a green space above 125sqm (Core)	100% of buildings within 300m distance of a green space and at least green space of 125sqm	50 - 99% of buildings within 300m distance of a green space and at least green space of 125sqm	< 50% of buildings within 300m distance of a green space and green space <125sqm
3	% area informal settlements with parks in walkable distance (Core)	100% of buildings within 300m distance of a Park	50 - 99% of buildings within 300m distance of a park	< 50% of buildings within 300m distance of a park
4	% neighbourhood area with primary health centre within 1000m distance (Core)	100% of buildings within 1000m distance of a primary health center	50 - 99% of buildings within 1000m distance of a primary health center	< 50% of buildings within 1000m distance of a primary health center
5	% area of informal settlement with primary health centre within 1000m distance (Core)	100% of buildings within 1000m distance of a primary health center	50 - 99% of buildings within 1000m distance of a primary health center	< 50% of buildings within 1000m distance of a primary health center
6	% neighbourhood area with Anganwadi centre within 500m distance (Core)	100% of buildings within 500m distance of an Anganwadi centre	50 - 99% of buildings within 500m distance of an Anganwadi centre	< 50% of buildings within 500m distance of an Anganwadi centre
7	% area of informal settlement with Anganwadi centre within 500m distance (Core)	100% of buildings within 500m distance of an Anganwadi centre	50 - 99% of buildings within 500m distance of an Anganwadi centre	< 50% of buildings within 500m distance of an Anganwadi centre
8	% of households that have access to a crèche within 500 m(Core)	100% of crèches within 500m distance from housing cluster/block	50- 99% of crèches within 500m distance from housing cluster/ block	< 50% of crèches within 500m distance from housing cluster/block
9	Percentage of open space in the neighbourhood (Core)	More than 15% open space out of total neighbourhood area	10- 15% open space out of total neighbourhood area	Less than 10% open space out of total neighbourhood area
10	Percentage of open space in informal settlements (Core)	More than 15% open space out of total area of the informal settlement	10- 15% open space out of total area of the informal settlement	Less than 10% open space out of total area of the informal settlement
Streets (City Level)				
11	% street length with walkable footpaths (Core)	Width more than 3m and >80% of route has continuous footpath and meet quality criteria	Width between 3m and 1.8m, and 30% to 80% of route has continuous footpath and meet quality criteria	Width less than 1.8m, and <30% of route has continuous footpath and meet quality criteria
12	% of streets with unobstructed and continuous footpath (Core)	More than 80% clear and unobstructed pedestrian footpath	50-80% clear and unobstructed pedestrian footpath	Less than 50% clear and unobstructed pedestrian footpath

13	Presence of kerb cuts y/n and No of kerb cuts per road km (Supporting)	More than 80% No of kerb cuts per road	50-80% No of kerb cuts per road	Less than 50% No of kerb cuts per road
14	Presence of cycle routes in the city and on major bordering roads (kms would be future indicator) (Supporting)	Not Applicable for benchmarking. This is a visual comprehension of the indicator. Presence (Yes/ No)		
S. No.	**Data Indicator title**	**Benchmark value**		
		Thriving	**Striving**	**Surviving**
15	% of total street length closed to 4 and 2-wheel traffic (Core)	More than 25% of total street length closed to 4 and 2-wheel traffic	10-25% of total street length closed to 4 and 2-wheel traffic	Less than 10% of total street length closed to 4 and 2-wheel traffic
16	Fatality rate for pedestrian and NMT users (%) (Core)	Less than 20% fatality rate for pedestrian and NMT users	20 - 60% fatality rate for pedestrian and NMT users	More than 60% fatality rate for pedestrian and NMT users
17	No. of fatal accidents occurring due to traffic in the city (Supporting)	<=2 person	3-6 person	>6 person
18	Percentage of traffic intersections with safe pedestrian crossing on major roads (Core)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
19	Percentage of children (0-14) fatalities because of road crashes (Core)	Less than 20% of children (0-14) fatalities because of road crashes	20 - 60% of children (0-14) fatalities because of road crashes	More than 60% of children (0-14) fatalities because of road crashes
Streets (Neighbourhood Level)				
20	Percentage of caregivers and infants/ toddlers walking to public amenities per day (day care centres, pre-primary and primary schools, primary health facilities, local markets) (Supporting)	100% caregivers and infants/ toddlers walking to public amenities and spend <15 mins in walking per day	50 - 99% caregivers and infants/toddlers walking to public amenities and spend 15 to 30 mins in walking per day	Less than 50% caregivers and infants/toddlers walking to public amenities and spend more than 30 mins in walking per day
21	Provision and quantity of public seating to stop and rest by in the neighbourhood (Core)	There is less than 50m distance between resting points, and > 50% of route do have provision for resting points	There is 50m and 150m distance between resting points, and 30-50% of route do have provision for resting points	There is more than 150m distance between resting points, and < 30% of resting points meet quality criteria

22	% of streets with adequate lighting (Core)	100% of street area with adequate lighting facilities with >= 8 lux	99 - 50% of street area with adequate lighting facilities with 6-8 lux	Less than 50% of street area with adequate lighting facilities with 6-8 lux
23	Streetlight spacing in the neighbourhood (Core)	~100% of street area with light poles spacing not more than 30m	~ 80% of street area with light poles spacing not more than 30m	~ 50% of street area with light poles spacing not more than 30m
24	Encroachment on NMT section of roads at neighbourhood level by Vehicle Parking (%) (Core)	Width >= 3M Less than <= 10% of total NMT roads	Width between 3m and 1.8m and 10-20% of NMT routes do have continuous footpath and meet quality criteria	Width less than 1.8m and > 20% of NMT routes do have continuous footpath and meet quality criteria
S. No.	**Data Indicator title**	**Benchmark value**		
		Thriving	**Striving**	**Surviving**
25	Presence of traffic calming measures in the neighbourhood and average speed of vehicles in the neighbourhood (Core)	Yes and less than 10kmph	Yes and 10-20 kmph	No and More than 20 kmph
26	Percentage of tree cover on major streets in a neighbourhood (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
Parks and Open spaces (City level)				
27	Number of good quality housing area park spaces in the city (Core)	More than 4 and Total area more than 15,000 sqm	3-4 and total area of 15,000 sqm	Less than 3 and Total area less than 15,000 sqm
28	Number of good quality neighbourhood park spaces in the city (Core)	More than 4 with total area more than 10,000 sqm	1 of 10,000 sqm or 1-4 with total Area of 10,000 sqm	Less than 1 with total area less than 10,000 sqm
29	Per Capita organised green open space in the city (Core)	More than 4sqm open space per person	3 - 4sqm open space per person	Less than 3sqm open space per person
30	% of parks at city level with free public drinking water, toilets and other facilities for families (Core)	100% park with basic facilities like drinking water, toilets and other facilities for families	50 - 99% with basic facilities like drinking water, toilets and other facilities for families	Less than 50% with basic facilities like drinking water, toilets and other facilities for families
Parks and Open spaces (Neighbourhood level)				
31	Number of Tot lots with play equipment (Supporting)	More than 6	4 - 6	Less than 6
32	Number of hours per day open areas is occupied in a neighbourhood - Tot-lot, housing area park, neighbourhood playground (Supporting)	More than 120 mins/2 hours - average green spaces occupied daily	60 - 120 mins - average green spaces occupied daily	Less than 60 mins - average hours green spaces occupied
33	% of infants, toddlers and their caregivers among all users of the park (Core)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on neighbourhood population and surveys		

34	% of area in parks dedicated to play spaces suitable for young children 0-5 (Core)	There is more than 10% of existing park area dedicated to young children (0-5 years)	There is 9 - 5% of existing park area dedicated to young children (0-5 years)	There is less than 5% of existing park area dedicated to young children (0-5 years)
35	Presence of natural materials in play equipment (y/n) play space (y/n), natural areas (e.g. greenery, sand, safe and clean water) as percentage of total play space (Core)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
S. No.	**Data Indicator title**	**Benchmark value**		
		Thriving	**Striving**	**Surviving**
36	Number of parks that have quality seating, facing 0-3 play areas (Core)	More than 4 parks at neighbourhood level with the provision of quality seating and oriented towards 0-3 play areas	4 - 2 parks at neighbourhood level with the provision of quality seating and oriented towards 0-3 play areas	Less than 2 parks at neighbourhood level with the provision of quality seating and oriented towards 0-3 play areas
37	% of parks with adequate lighting (Supporting)	100% of park area with adequate lighting facilities	99-50% of park area with adequate lighting facilities	Less than 50% of park area with adequate lighting facilities
38	Presence of stray animals in parks (Y/N) (Supporting)	Not Applicable		
39	Percentage distribution of children engaged in formal and informal play in organised green spaces (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on children footfall and surveys		
Mobility (City level)				
40	% of daily trips by non-motorised means (Supporting)	More than 50% of daily trips by non-motorised transport (NMT)	25 - 50% of daily trips by non-motorised transport (NMT)	< 25% of daily trips by non-motorised transport (NMT)
41	Percentage of Non-motorised transport network coverage in the city (Core)	More than or equal to 50% of non-motorised transport network coverage in the city	49 – 15% of non-motorised transport network coverage in the city	Less than 15% of non-motorised transport network coverage in the city
42	Service coverage of public transport in the city (Core)	LOS of >=1	LOS 0.3-0.9	LOS <=0.3
43	% neighbourhood area with transit stops in walkable distance (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		

44	Percentage of transit stops with ITC supportive elements (Shaded seating, Playful elements, Public toilets, Nursing station) within 100mts (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
Mobility (Neighbourhood level)				
45	% of journey destined at creche / kindergarten / play school is by walking or cycling (Supporting)	More than 40% of daily NMT trips destined at creche/ kindergarten/ school	25 - 40% of daily NMT trips destined at creche / kindergarten / school	Less than 25% of daily NMT trips destined at creche / kindergarten / school
46	Percentage of Anganwadi centre having public transit stops within 300m (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
S. No.	**Data Indicator title**	**Benchmark value**		
		Thriving	**Striving**	**Surviving**
Social Infrastructure (City level)				
47	Presence of Anganwadi centre with health clinics in the city (y/n) (Core)	There are more than 7 Anganwadi centres in the city for 1 lakh population	There are 5-7 Anganwadi centres in the city for 1 lakh population	There are less than 5 Anganwadi centres in the city for 1 lakh population
Social Infrastructure (Neighbourhood level)				
48	Total Number of private kindergartens in the neighbourhood and whether they have attached outdoor space (Core)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
49	% of government schools that allow usage of school campuses during non-school hours Core)	100% government school allow usage of school campuses during non-school hours	50 - 99% government school allow usage of school campuses during non-school hours	< 50% government school allow usage of school campuses during non-school hours
Urban services (City level)				
50	Household level coverage of SWM services through door-to-door collection of waste (Core)	100% households covered by daily door-step collection system	50 - 99% households covered by daily door-step collection system	Less than 50% households covered by daily door-step collection system
51	Household level coverage of SWM services through door-to-door collection of waste in informal settlements (Core)	100% households covered by daily door-step collection system	50 - 99% ouseholds covered by daily door-step collection system	Less than 50% households covered by daily door-step collection system
52	Quality of water supplied to household in neighbourhood (Supporting)	100% water sample meet potable water standards	50 - 99% water sample meet potable water standards	Less than 50% water sample meet potable water standards
53	Quality of water supplied to household in informal settlements (Supporting)	100% water sample meet potable water standards	50 - 99% water sample meet potable water standards	Less than 50% water sample meet potable water standards
Urban services (Neighbourhood level)				
54	% neighbourhood area with public toilets within 500m distance (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		

55	% neighbourhood area with women public toilets within 500m distance (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
56	% of road length with storm water drains (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
57	% of parks and open spaces within the neighbourhood with rain water harvesting systems (Core)	100% of parks and open spaces with rainwater harvesting facilities	50 - 99% of parks and open spaces with rainwater harvesting facilities	Less than 50% of parks and open spaces with rainwater harvesting facilities
58	% of Anganwadi centres PHCs, schools and other public buildings within the neighbourhood with rainwater harvesting systems (Core)	100% of Anganwadi centres, PHCs, schools and other public buildings with rainwater harvesting facilities	50 - 99% of Anganwadi centres, PHCs, schools and other public buildings with rainwater harvesting facilities	Less than 50% of Anganwadi centres, PHCs, schools and other public buildings with rainwater harvesting facilities
59	Presence of lighting with renewable energy source in and around housing parks (Supporting)	100% of housing area parks with renewable source lighting facilities	50 - 99%o f housing area parks with solar lighting facilities	Less than 50% of housing area parks with solar lighting facilities
S. No.	**Data Indicator title**	**Benchmark value**		
		Thriving	**Striving**	**Surviving**
Ambient environment (City level)				
60	Air Quality Index in the city (Core)	0-100	100-200	More than 200
Ambient environment (Neighbourhood level)				
61	Average noise level at the neighbourhood level (in dB) (Supporting)	Less than 5% of neighbourhood with decibel levels above standard 55dB	5 - 10% of neighbourhood with decibel levels above standard 55dB	More than 10% of neighbourhood with decibel levels above standard 55dB
62	Presence of no honking zones in the neighbourhood (Core)	Not Applicable		
63	RSPM (Size less than 10 microns) (Core)	0-40	40 - 80	More than 80
Social inclusion (Neighbourhood level)				
64	% of encroached/ informal area of total neighbourhood area (Supporting)	Less than 2% area is under encroachment/ Informal areas out of total neighbourhood area	2-5% area is under encroachment/ Informal areas out of total neighbourhood area	More than 5% area is under encroachment/ Informal areas out of total neighbourhood area
65	Community based organisations deliberately inviting women to planning meetings and delivering recommendations to ULB (Core)	More than 3 recommendation from RWA/equivalent bodies to ULB is from women representatives anticipated in RWA meetings	1> recommendation >3 from RWA/ equivalent bodies to ULB is from women representatives anticipated in RWA meetings	At least 1recommendation from RWA/ equivalent bodies to ULB is from women representatives anticipated in RWA meetings

S. No.	Data Indicator title	Benchmark value		
		Thriving	Striving	Surviving
66	Number of initiatives where NGOs working for women and children-oriented development were consulted or partnered with (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
Governance and finance (City level)				
67	Frequency of maintenance of parks (Core)	Daily maintenance of parks	Weekly maintenance of parks	Monthly maintenance of parks
68	% of municipal budget allocated for open spaces or parks (including management/ maintenance and programming) (Core)	There is more than 5% of the allocated municipal budget on open spaces or parks development	There is 5% < Park budget < 1% of the allocated municipal budget on open spaces or parks development	Less than 1% of the allocated municipal budget on open spaces or parks development
69	Provision of public art expenditure in budget to enhance the aesthetic of public spaces - (Y/N) (Supporting)	Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		
70	Efficiency in redressal of customer complaints on urban services and public spaces (Supporting)	100% complaints redressed within 24 hours of receipt of complaint	50 - 99% complaints redressed within 24 hours of receipt of complaint	Less than 50% complaints redressed within 24 hours of receipt of complaint

MONITORING AND EVALUATION OF POSITIVE BEHAVIOUR CHANGE

Creating young children- friendly cities involves more than just building infrastructure for young children and their caregivers. Addressing one issue alone, such as installing new playground equipment, may not achieve the desired outcome. It is crucial to consider behavioural barriers, social norms, and factors at various levels, in addition to developing infrastructure or addressing infrastructural challenges. This requires addressing and inculcating positive behavioural changes in the practices and behaviours of all relevant stakeholders, including caregivers, local communities, and most importantly, city agencies and service providers.

Urban planning and design, when overlayed with social and behavioural change initiatives that cater to the needs of young children and their caregivers can maximise positive interactions and connections at different levels, impacting physical, social, emotional, and cognitive early childhood development (ECD) outcomes. This can make the city an environment where young children are more likely to reach their full potential.

Thus, while planning for physical change indicators, it is also important to include behaviour change indicators (with respect to the programmes/projects prioritised behaviours for various stakeholders) for tracking the impact for long-term sustenance in the (M&E) plan for the city. The M&E plan outlines the activities, timelines, and resources necessary to measure and assess the progress, effectiveness, and impact of a project, programme, or policy. It specifies the indicators and data collection methods to be used to track and evaluate results.

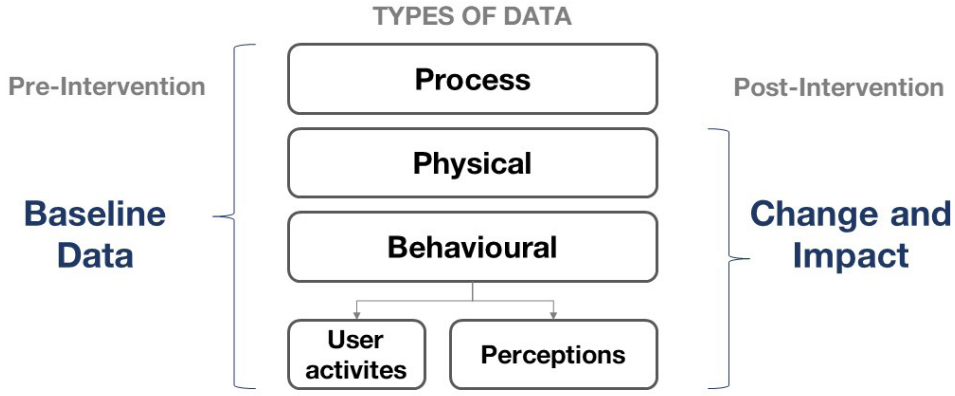

Figure 2.12 Types of data to be collected to measure impact in cities

Process Data: Data related to all activities conducted by cities enabling the implementation and mainstreaming of young children-centric lens, such as data coming from workshops, capacity building, FGDs conducted, institutional set-ups and policy inputs done.

Physical Data: This data depicts the counts of all the physical elements and facilities on ground to understand the quantity.

Behavioural Data: This data helps in documenting usage patterns of various kinds of users disaggregated by age, gender within a space and understanding their challenges, needs, and perceptions. This helps in understanding who is using the space, when and how, and what the community's needs are. This data, when placed in line with the physical data, helps us understand the suitability of the space.

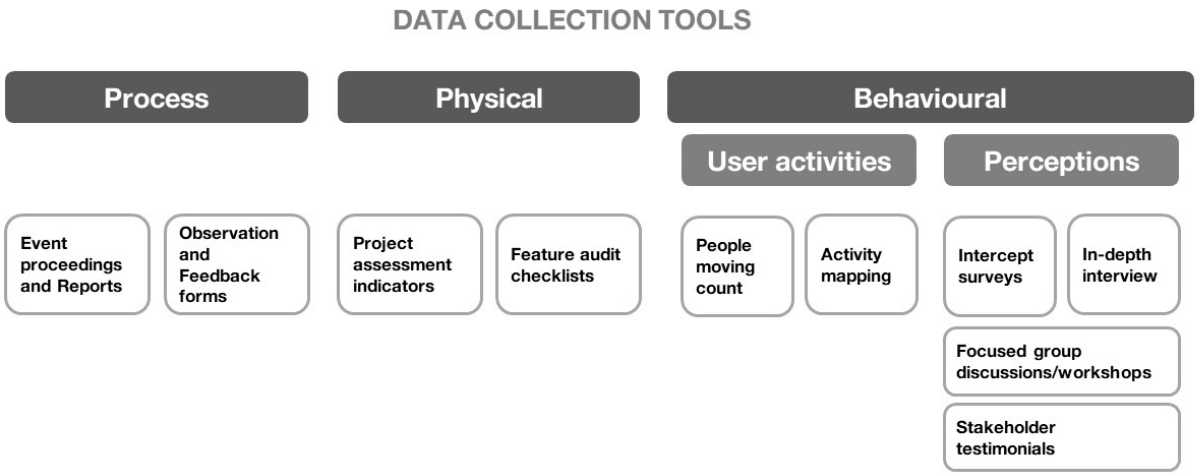

Figure 2.13 Tools for collecting various types of data

Cities must carry out assessmenrs, pre and post interventions, to measure the impact achieved. This impact may be measured in two ways: 1) by measuring improvement in indicators of relevant solution categories 2) by capturing users' perception through various surveys.

1. Improvement in Indicators

M&E indicators are provided as per the solution categories mentioned in the previous section. Cities must list down relevant indicators, for measuring baselines and impact. These indicators will be measured at the neighbourhood level. Increased provision or usage shall be achieved as an outcome through this.

2. Improvement in user perception

It is important to monitor and evaluate how the interventions are positively impacting users. Hence, certain tools can be employed by the city to measure impact of users' perception of improvement in terms of safety, accessibility, and usability.

Long-term behavioural changes

Interventions implemented in the neighbourhoods have the potential to positively impact behaviours among users such as young children and caregivers. These will eventually create long-term behavioural changes in the community, providing a holistic experience to ITCs. This will also improve certain behaviours among other stakeholders including key decision makers, municipal staff, service providers, and frontline workers.

It is important to conduct project and neighbourhood level studies through assessment (physical, user/behavioural and institutional level) of user behaviour patterns and focus group discussions with the local community and other stakeholders at various stages of the project for better design development. In addition, post implementation surveys must be conducted to evaluate changes in user behaviour pattern and make changes to design and planning, if necessary.

For more information on data collection methods, see:

- The Public life diversity toolkit for measuring city-wide baseline and impact of public spaces on people's life: https://issuu.com/gehlinstitute/docs/20160128_toolkit_2.0
- For solution domain specific checklists and guidelines see ITCN 2.0 Design Guidelines

The identified actions or supporters required to achieve the priority behaviours can be categorised under various domains, such as physical interventions, communications and awareness, capacity building or collaboration, and institutional set-up, to ensure the desired behaviour change.

Table 2.3 showcases some priority behaviours and sub-behaviours categorised for caregivers, the community, and city officials and can serve as key indicators to measure positive behavioural changes. These can be assessed periodically by the city through various data collection tools, such as site surveys and observation surveys.

The behavioural indicator list in Table 2.3 is an indicative list developed for the cities under Nurturing Neighbourhoods Challenge and is aligned to priority behaviours of key stakeholders favourable for the well being of young children and caregivers. Cities can come up with new indicators, based on their requirements and target behaviours.

The indicative measures given in the Table 2.3 will help cities to account for and establish positive behaviour change in the neighbourhood. These behaviour(s) shall be prioritised for immediate addressal, based on target user group, intended short-term and long-term changes and, primary objectives of the project.

The measures/indicators are categorised as “process, intermediate and outcome” measures, depending on the level of outcome they support to measure. These will help in understanding the impact of the project.

- **Process indicators:** Help track the implementation of the programme
- **Intermediate indicators:** Help track how the programme has started to be effective; these contribute to the outcome
- **Outcome indicators:** Help track how successful the activities have been in achieving programme goals related to specific behaviours

Setting baselines for behaviour change indicators is crucial for measuring progress. By recording a starting point for the behaviors to be influenced, one can assess them periodically against this baseline. This comparison allows to understand the outcome – whether or not the interventions are effectively driving positive change. There are several methods to establish this baseline, including surveys, interviews, focus groups, or even direct observation of the target behaviour. The best method depends on the specific behaviour and the city resources.

To effectively design and implement targeted solutions for ITCs, it is crucial to analyse their behaviours and usage patterns across various age groups, gender, and socioeconomic backgrounds. **Disaggregating data by age (0-2, 3-5 and >5 year old children), gender, and socioeconomic background** will provide valuable insights into how different demographics engage with spaces and help tailor interventions to meet their specific needs.

Positive behaviour change for caregivers of young children

Table 2.3 Categorised list of behavioural indicators

	TARGET BEHAVIOURS	MEASURES	TYPE OF INDICATOR	FRQUENCY OF MEASUREMENT	DATA COLLECTION TOOLS
Priority Behaviour	1. Infants and toddlers spend more time playing outdoors and around nature	Number of young children centric spaces implemented or improved across the city/ neighbourhood	Process		
		Caregivers reporting increased time spent at parks/open public spaces	Intermediate	Pre and Post intervention, Every 6 months	Intercept Survey
		Increase in children using early childhood facilities (anganwadi centre and PHCs) space for play and recreation	Outcome	Pre and Post intervention, Every 6 months	People moving count
		Increased footfall at parks and open spaces / anganwadi centre / PHCs and maternity home	Outcome	Pre and Post intervention, Every 6 months	People moving count
		Children observed interacting with plants/ shrubs/flowering plants etc	Outcome	Pre and Post intervention, Every 6 months	Activity mapping
Sub-Behaviours	1.1 Infants, toddlers and caregivers engage in diverse types of play - formal and informal	Increase in children playing with formal play equipments	Outcome	Pre and Post intervention, Every 6 months	Activity mapping
		Increase in children engaging in play without an equipment	Outcome	Pre and Post intervention, Every 6 months	Activity mapping
		Increase in caregivers engaging in play with their children	Outcome	Pre and Post intervention, Every 6 months	Activity mapping
	1.2 Caregivers take infants and toddlers to public open spaces, such as parks, gardens, etc. more often	Increase in number of times caregivers take their children to parks and gardens in a week	Outcome	Pre and Post intervention, Every 6 months	Intercept Survey
		Caregivers report increased feeling of satisfaction (safety and comfort) at ITC centric locations	Intermediate	Pre and Post intervention, Every 6 months	Intercept Survey
	1.3 Young children and caregivers in vulnerable community spend more time playing outdoors	Caregivers from vulnerable communities report accessing parks and open spaces, anganwadi centre, PHCs more often	Intermediate	Pre and Post intervention, Every 6 months	Testimonials

Positive behaviour change for caregivers of young children

Table 2.3 Categorised list of behavioural indicators

	TARGET BEHAVIOURS	MEASURES	TYPE OF INDICATOR	FREQUENCY OF MEASUREMENT	DATA COLLECTION TOOLS
Priority Behaviour	2. Caregivers take infants and toddlers to visit public spaces / facilities more often	Number of young children centric spaces implemented or improved across the city/ neighbourhood	Process		
		Increased footfall at parks and open spaces /anganwadi centres / PHCs and maternity home	Outcome	Pre and Post intervention, Every 6 months	People moving count
Sub-Behaviours	2.1 Caregivers and children are accessing / using ECD services such as anganwadi centres and PHCs	Caregivers report increased feeling of satisfaction (safety and comfort) at ITC centric locations	Intermediate	Pre and Post intervention, Every 6 months	Intercept Survey
	2.2 Caregivers use amenities, such as nursing booths, toilets and drinking water while in public spaces - seating, shaded waiting areas	Caregivers report increased feeling of satisfaction (safety and comfort) at ITC centric locations	Intermediate	Pre and Post intervention, Every 6 months	Intercept Survey
		Caregivers report improved convenience while visiting a facility due to presence of ITC centric amenities	Intermediate	Pre and Post intervention, Every 6 months	Intercept Survey
		Caregivers report increase in usage of ITC centric amenities such as nursing booths, public toilets and diaper changing stations	Intermediate	Pre and Post intervention, Every 6 months	Intercept Survey
	2.3 Young children and caregivers in vulnerable community use the available public spaces and facilities	Caregivers from vulnerable communities report accessing parks and open spaces, ECD facilities more often	Outcome	Pre and Post intervention, Every 6 months	Testimonials
	2.4 Caregivers spend more time socialising in public spaces with friends, neighbours, family	Increase in caregivers observed interacting with peers	Outcome	Pre and Post intervention, Every 6 months	Activity mapping
	2.5 Front line workers such as security guard, ticket counter staff and other staff prioritises ITC	# of front-line workers attending capacity building workshops	Process	As the event occurs	Proceedings / event reports

Positive behaviour change for caregivers of young children

Table 2.3 Categorised list of behavioural indicators

	TARGET BEHAVIOURS	MEASURES	TYPE OF INDICATOR	FREQUENCY OF MEASUREMENT	DATA COLLECTION TOOLS
Priority Behaviour	3. Young children and their families are choosing to walk and use public transport more	Number of young children centric spaces implemented or improved across the city/ neighbourhood	Process		
		Increase in number of caregivers walking to parks and open spaces / anganwadi centres / PHCs and maternity home	Outcome	Pre and Post intervention, Every 6 months	People moving count
		Increase in number of caregivers reporting taking public transport for day to day activities	Outcome	Pre and Post intervention, Every 6 months	Intercept Survey
Sub-Behaviours	3.1 Pedestrians walk on dedicated crossings and walkways	Increase in pedestrian using dedicated crossings or walkways	Outcome	Pre and Post intervention, Every 6 months	Activity mapping
	3.2 Caregivers are having safer walking experience	Caregivers report feeling safe while crossing or walking with their children	Intermediate	Pre and Post intervention, Every 6 months	Intercept Survey
	3.3 Caregivers are increasingly using public transport for commute	Increase in number of caregivers reporting taking public transport for day to day activities	Intermediate	Pre and Post intervention, Every 6 months	Intercept Survey
		Increased footfall at transit stations	Outcome	Pre and Post intervention, Every 6 months	People moving count
	3.4 Front line workers such as security guard, ticket counter staff , traffic police and other staff prioritises ITC	# of front line workers attending capacity building workshops	Process	As the event occurs	Proceedings / event reports
		Front line workers such as security guard, ticket counter staff, traffic police and other staff report enhanced understanding of young children and caregivers need	Outcome	Pre and Post intervention	Testimonials

Positive behaviour change for caregivers of young children

Table 2.3 Categorised list of behavioural indicators

	TARGET BEHAVIOURS	MEASURES	TYPE OF INDICATOR	FREQUENCY OF MEASUREMENT	DATA COLLECTION TOOLS
Priority Behaviour	4. Caregivers of young children adopt responsive caregiving practices at home and in public spaces	Number of responsive caregiving trainings conducted for parents and other caregivers	Process	As the event occurs	Proceedings / event reports
		Number of parents/ caregivers who attend responsive caregiving trainings	Process	As the event occurs	Proceedings / event reports
		Number of parents who reported practicing positive ECD behaviours at home or in public spaces	Intermediate	Pre and Post intervention, Every 6 months	Intercept survey
		Increase in parents and caregivers reporting engaging in stimulating speech and play with their infants and toddlers	Outcome	Pre and Post intervention, Every 6 months	Intercept survey
		Increase in parents and caregivers reporting reduced screen time for their infants and toddlers	Outcome	Pre and Post intervention, Every 6 months	Intercept survey
		Increase in caregivers who are observed bringing their toddlers to public spaces	Outcome	Pre and Post intervention, Every 6 months	People moving count
		Increase in caregivers who are observed actively engaging in play with their children	Outcome	Pre and Post intervention, Every 6 months	Activity mapping

Positive behaviour change for communities

Table 2.3 Categorised list of behavioural indicators

	TARGET BEHAVIOURS	MEASURES	TYPE OF INDICATOR	FREQUENCY OF MEASUREMENT	DATA COLLECTION TOOLS
Priority Behaviour	5. Community encourages young children and family-friendly changes in the neighbourhood				
Sub-Behaviours	5.1 Community participates in activities to enhance environment, such as cleanliness drives, plantation, etc.	# of community activities such as cleanliness, plantation drives organised by citizen groups/ RWAs	Process	As the event occurs	Proceedings / event reports
		# of local citizens participating in cleanliness or plantation drives	Process	As the event occurs	Proceedings / event reports
	5.2 Caregivers and community engage in community action for upkeep of interventions	# partnerships / institutional setups formed or other modes established with local citizen groups or RWAs for upkeep and maintenance of the project	Outcome	As the event occurs	Notification/ letters/MOUs
		# of local citizens and caregivers took active part in implementation of ITC centric projects	Intermediate	As the event occurs	Proceedings / event reports
		# of local champions created	Outcome	As the event occurs	Proceedings / event reports
	5.3 Caregivers and community Participate in co-creation of ITC-oriented solutions, workshops and convenings	# of caregivers and local citizens attending meetings, discussions, workshops related to projects or neighbourhood improvement for ITCs	Intermediate	As the event occurs	Proceedings / event reports
	5.4 Caregivers in vulnerable communities participate in decision-making for interventions related to them	# of caregivers and local citizens from vulnerable communities attending meetings, discussions, workshops related to projects or neighbourhood improvement for ITCs	Process	As the event occurs	Proceedings / event reports
	5.5 Community supports resource allocation and ITC centric projects	# partnerships / institutional setups formed or other modes established with local citizen groups or RWAs for upkeep and maintenance of the project	Outcome	As the event occurs	Notification/ letters/MOUs
		Community leaders take actions towards communicating in public domain and approaching decision makers for action on ITC centric projects	Outcome	As the event occurs	Proceedings / event reports

Positive behaviour change for city officials (city leaders/ technical staff/ frontline workers)

Table 2.3 Categorised list of behavioural indicators

	PRIORITY BEHAVIOURS	MEASURES	TYPE OF INDICATOR	FREQUENCY OF MEASUREMENT	DATA COLLECTION TOOLS
Priority Behaviour	6. City officials prioritise the needs of ITCs in designing, planning and management				
Sub-Behaviours	6.1 City officials consult caregivers, ECD experts, and ensure inclusive participation by vulnerable communities to co-create solutions	# of FGDs and engagement sessions conducted with caregivers and community people (including vulnerable population)	Process	As the event occurs	Proceedings / event reports
	6.2 Agency staff communicates about ITC-centric initiatives to stakeholders, peers, public	# of social media posts	Process	As the event occurs	-
		# of articles/blogs/op-eds/press releases in print media by agency	Process	As the event occurs	-
		# of public workshops where agency staff presented	Intermediate	As the event occurs	Proceedings / event reports
		# of social campaigns conducted on TV / radio	Process	As the event occurs	-
	6.3 Agency staff and FLWs implements projects and prioritise cleanliness and maintenance of ITC centric places	# of ITC centric projects implemented	Intermediate	As the event occurs	-
		# of ITC centric projects where dedicated budget has been allocated for maintenance and upkeep	Intermediate	As the event occurs	-
	6.4 Agency staff and FLWs participate in capacity-building activities to enhance knowledge and skills on ITCN	# of capacity building workshops conducted for city officials, front line workers and other relevant stakeholders	Process	As the event occurs	Proceedings / event reports
		# of agency staff who participated in capacity building workshops and trainings	Process	As the event occurs	Proceedings / event reports
		Total # of returning participants in capacity building workshops	Intermediate	As the event occurs	Proceedings / event reports

Positive behaviour change for city officials (city leaders/ technical staff/ frontline workers)

Table 2.3 Categorised list of behavioural indicators

	PRIORITY BEHAVIOURS	MEASURES	TYPE OF INDICATOR	FREQUENCY OF MEASUREMENT	DATA COLLECTION TOOLS
Sub-Behaviours	6.5 Agency staff adopts long-term changes in plans and policies to influence ITC-centric development	# of long-term policy documents and plans influenced and communicated	Intermediate	As the event occurs	Notification/ letters
	6.6 Agency staff monitors and uses ITC data.	# of projects where ITC-centric data is monitored before and after the intervention	Process	As the event occurs	
	6.7 Agency staff peruses partnerships and cross-sectoral collaborations with other agencies, NGOs, ECD experts	NN advisory cell is formed	Outcome	As the event occurs	Notification/ letters
		# of NGO representatives who are part of advisory cell	Process	As the event occurs	Notification/ letters
		# of ECD experts who are part of Advisory cell	Process	As the event occurs	Notification/ letters
		# of govt. and non. govt. partnerships formed by the agency	Intermediate	As the event occurs	Notification/ letters
	6.8 Agency staff identifies and establish financial and human resources for ITC-oriented development projects	Key officials identify and adopt diversified sources of finance for ITC centric projects	Outcome	As the event occurs	-
		# of ITC centric projects the city has established funding for	Intermediate	As the event occurs	-
		# of total staff working on ITC centric projects	Process	As the event occurs	-
	6.9 Agency staff nurtures/sustains an institutional setup	The city has established an institutional set-up for promoting and coordinating ITC centric development	Outcome	As the event occurs	-
		# of agency staff and FLWs who are part of the institutional set-up	Intermediate	As the event occurs	-
		Frequency of meeting of the institutional set-up	Process	As the event occurs	Proceedings / event reports

REVIEW, LEARN AND IMPROVE

After impact assessment, cities shall move to the next step of Review, Learn and Improve. At this step, the process becomes cyclical – cities may revisit their intervention strategies and improve/propose new solutions.

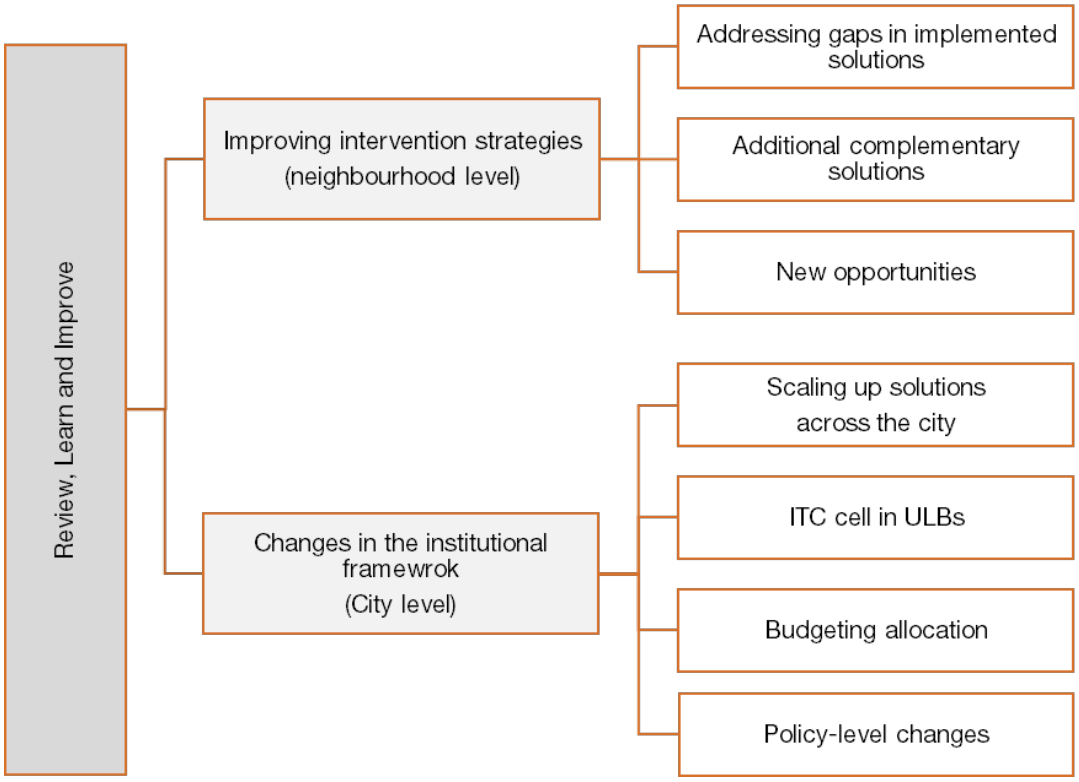

Figure 2.14 Components of Review, Learn and Improve Process

City-level institutional changes:

Based on the insights gained from neighbourhood level interventions, city officials should formulate scaling up mechanism to institute ITCN approach across the city.

- Cities may scale up their approach by extending or replicating similar interventions across all neighbourhoods/wards. Formulating a program through integration of multiple and similar projects can be an opportunity, which can connect and integrate multiple efforts along similar lines at a larger level.
- Setting up an ITC cell/ committee /working group, or other institutional set-up within the ULB will help in administering city-wide ITCN approach.
- Cities should allocate dedicated funds for ITC-oriented projects which belong to multiple solution categories such as streets, open spaces, social infrastructure, urban services, nutrition and resilience. Mapping potential sources and mechanisms of funding (opportunities of convergence, enabling private fundraising, etc.) will enable long-term sustenance of the programme.
- Cities should also identify plans and policies drafted by the city that needs to be modified to incorporate ITCN approach. These could be Schedule of Rates (SoR), Comprehensive Master Plans, Mobility Plans, Disaster Management Plans, Local Areas Plans and similar such plans and policies.
- For evidence-based data planning, cities should also use data to understand base-line, identify pilots, formulate plans and policies, track progress and evaluate out-comes and impact generation enabling ITC data-oriented decision making.
- Civic engagement with city stakeholders to build a momentum amongst them, induce a sense of ownership and achieve long-term sustenance and positive behaviour change in the community can be incorporated with each ITCN programmes in the city. Through this, cities can create regular and system-atic opportunities for public participation, active, multi-channel communications strategy and develop consensus building mechanism.
- Consistent capacity building for ITC friendly approaches across all levels in government and non-governmental agencies can ensure capacity building across departments and hierarchy of officials.
- Cities should also establish partnerships and buy-in from other agencies, organisations and stakeholders who can support at various steps during the program implementation. This will enable leadership and key champions among non- government stakeholders, creating opportunities for partnerships, also facilitating and incorporating community feedback mechanism.

04 City and Neighbourhood Indicators

Indicator ##/70
INDICATOR TITLE

The following pages list out the various indicators. The information provided for each indicator is set out as per the format below:

Definition
Full definition of data to be collected.

Rationale for the Indicator
150 word description of overall significance and rationale for assessing and monitoring the performance indicator. What does the indicator mean for ITCs experience? What does the indicator tell you about the quality of public realm for ITCs?

Data Requirements	Frequency of measurement	Jurisdiction of measurement
Specific elements of data that need to be captured along with corresponding unit of measurement. The point and frequency of data capture should be mentioned. Any specific formula to be used to arrive at the performance indicator.	Frequency at which the performance indicator will be assessed (not the frequency of the data elements collection) should be indicated based on the potential for visible change between time periods. This should strike a balance between too long which prevents feedback into operational improvements and too short which creates a time burden in measuring and reporting.	The geographic jurisdiction for which performance should be measured (not the point of data collection). Measuring at the city and neighbourhood level would give an important indication of child-friendliness. Data should be collected at the neighbourhood level and aggregated to city level performance for reporting, to compare between cities.

Reliability of measurement

The reliability of data systems underpin the reliability of performance measurement and management decisions. Reliability of data systems should be measured from A (highest/preferred), B, C (intermediate levels) to D (lowest). Data of a high reliability (A) should be targeted, provided on a repeat basis and in a consistent manner.

A	B	C	D

Benchmark Value

Benchmark values should be provided (indicating what constitutes a high to low score) against which performance can be monitored.

Thriving (3)	Striving (2)	Surviving (1)

NEIGHBOURHOOD LAYOUT

Objectives Achieved	Indicators
	1. Perception of safety for ITCs of key public amenities -streets, parks, play-spaces, school, health service (Supporting)
	2. % of buildings within 300m distance of a green space above 125 Sq.m.(Core) 3. % area informal settlements with parks in walkable distance (Core) 4. % neighbourhood area with primary health centre within 1000m distance (Core) 5. % informal settlements with primary health centre within 1000m distance (Core) 6. % neighbourhood area with Anganwadi centre within 500m distance (Core) 7. % informal settlements with Anganwadi centre within 500m distance (Core) 8. % of households that have access to a crèche within 500 m (Core)
	9. % of open space in the neighbourhood (Core) 10. % of open space in informal settlements (Core)

Indicator 1/70

PERCEPTION OF SAFETY FOR ITCS OF KEY PUBLIC AMENITIES

Definition

Number of caregivers of young children feels safe outside environment around public amenities (streets, parks, playspaces, school, health services etc.)

Rationale for the Indicator

The perception of safety for ITCs plays an important role in their motivation to spend time outdoors, the activities they are included in and how relaxed, welcome and comfortable they feel when they do. The perceived safety of public amenities that are frequently accessed by ITCs will contribute to their effectiveness. Existing of accessible street with kerb cut promotes perceived safety in the neighbourhood.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey/ information

Benchmark Value		
Thriving	**Striving**	**Surviving**
More than 80% caregivers of young children feels safe outside environment around public amenities	80 - 50% caregivers of young children feels safe outside environment around public amenities	less than 50% caregivers of young children feels safe outside environment around public amenities

Indicator 2/70

PERCENTAGE OF BUILDINGS WITHIN 300M DISTANCE OF A GREEN SPACE ABOVE 125 SQM

Definition

Well-designed networks of green spaces encourage infant, Toddlers and caregivers to travel safely by foot or by bicycle for recreation. The number of buildings at neighbourhood level is within the range of 300 m distance of adequate green space

Rationale for the Indicator

It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as daycare, health centres, parks and other amenities. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Observational on-site survey of all housing cluster and green spaces	Observational on-site survey of specific housing cluster and green spaces as averages	Desk based estimation For example - based on existing maps and with systematic on-site verification.	Desk based estimation For example - based on existing maps like Landuse map.

Benchmark Value*		
Thriving	**Striving**	**Surviving**
100% of buildings within 300m distance of a green space and atleast green space of 125 m^2	50-99% of buildings within 300m distance of a green space and atleast green space of 125 m^2	< 50% of buildings within 300m distance of a green space and green space <125 m^2

* Pt.8.4.10.2 Amenities, *Page 368*, URDPFI Guidelines 2014, Ministry of Urban Development; *Page 7,* Urban Greening Guidelines, TCPO, GoI, MoUD

Indicator 3/70

PERCENTAGE AREA INFORMAL SETTLEMENTS WITH PARKS IN WALKABLE DISTANCE

Definition
Access to neighbourhood parks and open spaces for children and caregivers residing in informal settlements and vulnerable communities.

Rationale for the Indicator
Closeness and interaction with nature play an important role in cognitive and physical developement of young children. Being derived of a place to play and interact with nature elevate the vulnerability to environmental and other risks for children and caregiver residing in informal settlements.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Spatial mapping	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all ward level	Mapping of all parks / openspaces and informal settlements across all wards	Desk based mapping and on ground verification plus spatial analysis to understand proximity and accessibility.	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% of buildings within 300m distance of a Park	50 - 99% of buildings within 300m distance of a park	< 50% of buildings within 300m distance of a park

Indicator 4/70

PERCENTAGE NEIGHBOURHOOD AREA WITH PRIMARY HEALTH CENTRE WITHIN 1000M DISTANCE

Definition
Access to primary health centers for children and caregivers residing in neighbourhoods and within 1000m distance.

Rationale for the Indicator
It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as health centres. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Spatial mapping	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all ward level	Mapping of all PHCs across all wards and residential buildings	Desk based mapping and on ground verification plus spatial analysis to understand proximity and accessibility.	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value*		
Thriving	**Striving**	**Surviving**
100% of buildings within 1000m distance of a primary health centre	50 - 99% of buildings within 1000m distance of a primary health centre	< 50% of buildings within 1000m distance of a primary health centre

Indicator 5/70

PERCENTAGE AREA OF INFORMAL SETTLEMENTS WITH PRIMARY HEALTH CENTRE WITHIN 1000M DISTANCE

Definition

Access to primary health centers for children and caregivers residing in informal settlements and within 1000m distance.

It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as health centres. The presence of these within the neighbourhood especially for informal settlements, enhances their accessibility, through travel modes such as walking and cycling.

Rationale for the Indicator

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Spatial mapping	Once annually	Notified and non-notified slums

Reliability of Measurements			
Comprehensive survey at all ward level	Mapping of all PHCs across all wards and residential buildings	Desk based mapping and on ground verification plus spatial analysis to understand proximity and accessibility.	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value*		
Thriving	**Striving**	**Surviving**
100% of buildings within 1000m distance of a primary health centre	50 - 99% of buildings within 1000m distance of a primary health centre	< 50% of buildings within 1000m distance of a primary health centre

Indicator 6/70

PERCENTAGE NEIGHBOURHOOD AREA WITH ANGANWADI CENTRE WITHIN 500M DISTANCE

Definition
Access to Anganwadi centres for children and caregivers residing in neighbourhoods and within 500m distance.

Rationale for the Indicator
It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as Anganwadi centres. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Spatial mapping	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey and mapping at all ward level	Mapping of all Angawadi centres across all wards and residential buildings	Desk based mapping and on ground verification plus spatial analysis to understand proximity and accessibility.	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% of buildings within 500m distance of an Anganwadi centre	50 - 99% of buildings within 500m distance of an Anganwadi centre	< 50% of buildings within 500m distance of an Anganwadi centre

Indicator 7/70

PERCENTAGE AREA OF INFORMAL SETTLEMENTS WITH ANGANWADI CENTRE WITHIN 500M DISTANCE

Definition
Access to Anganwadi centres for children and caregivers residing in informal settlements and within 500m distance.

Rationale for the Indicator
It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as Anganwadi centre. The presence of these within the neighbourhood especially in informal settlements, enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Spatial mapping	Once annually	Notified and non-notified slums

Reliability of Measurements			
Comprehensive survey and mapping at all ward level	Mapping of all Angawadi centres across all wards and residential buildings	Desk based mapping and on ground verification plus spatial analysis to understand proximity and accessibility.	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% of buildings within 500m distance of an Anganwadi centre	50 - 99% of buildings within 500m distance of an Anganwadi centre	< 50% of buildings within 500m distance of an Anganwadi centre

Indicator 8/70

PERCENTAGE OF HOUSEHOLDS THAT HAVE ACCESS TO A CRÈCHE WITHIN 500 M

Definition

A crèche is a facility which enables parents to leave their children while they are at work and where children are provided stimulating environment for their holistic development. Crèches are designed to provide group care to children, usually up to 6 years of age, who need care, guidance and supervision away from their home during the day. The number of operational crèches at neighbourhood level is within the range of 300 m distance from housing cluster.

Rationale for the Indicator

It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as daycare, health centres, parks and other amenities. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Spatial mapping	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey and mapping at all ward level	Mapping of all crèches across all wards and residential buildings	Desk based mapping and on ground verification plus spatial analysis to understand proximity and accessibility.	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value*		
Thriving	**Striving**	**Surviving**
100% of crèches within 500m distance from housing cluster/block	50-99% of crèches within 500m distance from housing cluster/block	< 50% of crèches within 500m distance from housing cluster/block

* Pt.8.4.10.2 Amenities, *Page 368*, URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 9/70

PERCENTAGE OF OPEN SPACE IN THE NEIGHBOURHOOD

Definition
Area under open spaces (including vacant land, organised green and under utilised land) as percentage of total area of the neighbourhood.

Rationale for the Indicator
Open spaces are ideal places for ITCs to socialise, play and interact. Accessible good quality parks should be provided to promote outdoor activities for ITCs, connection to nature and climate resilience. The number and amount of different park spaces indicates the range of opportunities and the sufficiency of provision for the community.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Existing Data	Once annually	Neighbourhood

Reliability of Measurements			
Based on latest published landuse report	Selected landuse survey at specific housing blocks as averages and based on old ULB landuse report	Desk based estimation For example - based on old landuse report	Desk based estimation For example - based on earlier data

Benchmark Value		
Thriving	**Striving**	**Surviving**
More than 15% open space out of total neighbourhood area	10- 15% open space out of total neighbourhood area	Less than 10% open space out of total neighbourhood area

Indicator 10/70

PERCENTAGE OF OPEN SPACE IN INFROMAL SETTLEMENTS

Definition
Area under open spaces (including vacant land, organised green and underitlised land) as percentage of total area of the informal settlements.

Rationale for the Indicator
Open spaces are ideal places for ITCs to socialise, play and interact. Accessible good quality parks should be provided to promote outdoor activities for ITCs, connection to nature and climate resilience. The number and amount of different park spaces indicates the range of opportunities and the sufficiency of provision for the community.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Existing Data	Once annually	Notified and non-notified slums

Reliability of Measurements			
Based on latest published landuse report	Selected landuse survey at specific housing blocks as averages and based on old ULB landuse report	Desk based estimation For example - based on old landuse report	Desk based estimation For example - based on earlier data

Benchmark Value		
Thriving	**Striving**	**Surviving**
More than 15% open space out of total area of informal settlements	10- 15% open space out of total area of informal settlements	Less than 10% open space out of total area of informal settlements

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STREETS

Objectives Achieved	City level indicators
	11. % street length with walkable footpaths (Core)
	12. % of streets with unobstructed and continuous footpath. (Core) 13. Presence of kerb cuts y/n and no. of kerb cuts per road per km. (Supporting) 14. Presence of cycle routes in the city and major bordering roads (kms would be future indicator) (Supporting) 15. % of total street length closed to 4-wheel and 2-wheel traffic (Core). 16. Fatality rate for pedestrian and NMT users (%). (Core) 17. No. of fatal accidents occurring due to traffic in the city. (Supporting) 18. Percentage of traffic intersections with safe pedestrian crossing on major roads.(Core) 19. Percentage of children (0-14) fatalities because of road crashes. (Core)
	Neighbourhood level indicators
	20. Percentage of caregivers and infants/toddlers walking to public amenities (day care centres, pre-primary and primary schools, primary health facilities, local markets) (Supporting)
	21. Provision and quantity of public seating to stop and rest by in the neighbourhood (Core)
	22. % of streets with adequate lighting (Core) 23. Streetlight spacing in the neighbourhood (Core) 24. Encroachment on NMT section of roads at neighbourhood level by vehicle parking (%) (Core) 25. Presence of traffic calming measures in the neighbourhood and average speed of vehicles in the neighbourhood (Core)
	26. Percentage of tree cover on major streets in a neighbourhood. (Supporting)

Indicator 11/70

PERCENTAGE STREET LENGTH WITH WALKABLE FOOTPATHS

Definition
Footpaths/walk zone/sidewalk spaces- are defined as any area primarily used by "all" pedestrian. They can be adjacent to roadways, or away from the road. Number of major routes at neighbourhood level with the existence of adequate footpaths /walk zone.

Rationale for the Indicator
Pedestrians are affected by their surroundings, ambience of the space around them and they respond accordingly to make decisions whether to use a facility or not. Pedestrian footpath can be used at select places for people to congregate. Place making encourages more people to use pedestrian facilities, which in-turn makes our streets livelier and safer for young children.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y/n, No.	Spatial mapping	Once annually	City

Reliability of Measurements			
Comprehensive survey and mapping at all ward level	Mapping of all street routes and footpath length across all wards	Desk based mapping and on ground verification plus spatial analysis to understand proximity and accessibility.	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value*		
Thriving	**Striving**	**Surviving**
Width more than 3 m and >80% of route do have continuous footpath and meet quality criteria	Width between 3 m and 1.8 m and 30% - 80% of route do have continuous footpath and meet quality criteria	Width less than 1.8 m and <30% of route do have continuous footpath and meet quality criteria

*Pt.8.2.3. Footpath, *Page 286* , URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 12/70

PERCENTAGE OF STREETS WITH UNOBSTRUCTED AND CONTINUOUS FOOTPATH

Definition
Continuous pedestrian footpath as percentage of total road length.

Rationale for the Indicator
Clear, comfortable and legible movement through the neighbourhood is more accessible and inclusive for a range of ages and abilities as well as for ITCs who may be travelling with strollers.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	City

Reliability of Measurements			
Comprehensive survey at all street at neighbourhood level	Sample survey at all street at neighbourhood level as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value*		
Thriving	**Striving**	**Surviving**
More than 80% clear and unobstructed pedestrian footpath	50%- 80% clear and unobstructed pedestrian footpath	Less than 50% clear and unobstructed pedestrian footpath

*SLBs for Urban Transport- MoUD, Government of India

Indicator 13/70

PRESENCE OF KERB CUTS

Definition
Existence of kerb cuts in existing local and collector street, and number of kerb cuts per km of street.

Rationale for the Indicator
Traffic, regardless of the speed it is travelling at, affects how safe and relaxing the street feels and contributes to the severance effect of the street. Even slow-moving traffic affects the safety and ease of crossing, walking and cycling for ITCs.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y / n	Observation	Once annually	City

Reliability of Measurements			
Comprehensive survey at all street at neighbourhood level	Sample survey at selected street at neighbourhood level as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation e.g. based on earlier survey / information

Benchmark Value		
Thriving	**Striving**	**Surviving**
More than 80% No of kerb cuts per road	50-80% No of kerb cuts per road	Less than 50% No of kerb cuts per road

Indicator 14/70

PRESENCE OF CYCLE ROUTES INSIDE THE NEIGHBOURHOOD AND ON MAJOR BORDERING ROADS (KMS WOULD BE FUTURE INDICATOR)

Definition
Existence of cycle routes in the neighbourhood

Rationale for the Indicator
Offering choice to ITCs in active, safe and pleasant travel modes can cater for greater freedom and ease of journeys through the neighbourhood. Considerations include the quality, width and accessibility of routes.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y / n	Existing data	Once annually	City

Reliability of Measurements			
Based on published government notification	Based on government advisory report	Desk based estimation For example - based on latest secondary sources	Desk based estimation For example - based on old secondary sources

Benchmark Value		
Thriving	Striving	Surviving
Not applicable for benchmarking. This is a visual comprehension of the indicator. Presence (Yes/No)		

Indicator 15/70

PERCENTAGE OF TOTAL LOCAL STREET LENGTH CLOSED TO 4- AND 2-WHEEL MOTORISED TRAFFIC

Definition
Length of local and collector street at neighbourhood level closed to 4 and 2 wheel traffic movement as percentage of total local and collector street network

Rationale for the Indicator
Traffic, regardless of the speed it is travelling at, affects how safe and relaxing the street feels and contributes to the severance effect of the street. Even slow-moving traffic affects the safety and ease of crossing, walking and cycling for ITCs.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	City

Reliability of Measurements			
Based on published government notification	Based on government advisory report	Desk based estimation For example - based on latest secondary sources	Desk based estimation For example - based on old secondary sources

Benchmark Value		
Thriving	**Striving**	**Surviving**
More than 25% of total street length closed to 4 and 2 wheel traffic	10 - 25% of total street length closed to 4 and 2 wheel traffic	Less than 10% of total street length closed to 4 and 2 wheel traffic

Indicator 16/70

FATALITY RATE FOR PEDESTRIAN AND NMT (%)

Definition
Level of fatality is an indication of road safety. Road design and available road infrastructure, traffic management and other such reasons significantly contribute to road safety. Within the number of accidents, the vulnerable road users are pedestrians and persons with non-motorised vehicles. It is therefore, critical to monitor the extent to which such road users are impacted within the overall set of road users.

Rationale for the Indicator
ITCs have to take care of multiple things while making their daily trips in the neighbourhood. Its very important to provide safety from any mishaps due to traffic movement.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	City
Reliability of Measurements			
From the records from police, the number of persons of above, who were pedestrians or on non-motorised vehicles	Record of fatalities from police records. Data should be considered pertaining to the urban limits or jurisdiction of police department	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information
Formula: (Total number of fatalities recorded of persons who were pedestrians or on non-motorised transport vehicles, in road accidents within city limits in given year / Total number of fatalities recorded in road accidents within city limits in the given calendar year)*100			
Benchmark Value*			
Thriving	**Striving**	**Surviving**	
Less than 20% fatality rate for pedestrian and NMT users	20 - 60% fatality rate for pedestrian and NMT users	More than 60% fatality rate for pedestrian and NMT users	

*SLBs for Urban Transport- MoUD, Government of India

Indicator 17/70

NUMBER OF FATAL ACCIDENTS OCCURRING DUE TO TRAFFIC IN THE CITY

Definition
Level of fatality is an indication of road safety. Road design and available road infrastructure, traffic management and other such reasons significantly contribute to road safety. Therefore fatality rate should be monitored. The benchmark for the same is zero, as ideally fatalities and injuries out of accidents should be brought down to nil.

Rationale for the Indicator
ITCs have to take care of multiple things while making their daily trips in the neighbourhood. Its very important to provide safety from any mishaps due to traffic movement.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
Ratio	Observation	Once annually	City
Reliability of Measurements			
Record of fatalities from police records. Data should be considered pertaining to the urban limits or jurisdiction of police department	Record of fatalities from police records or other city records	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information
Formula: Fatality rate per 100000 population = (Total number of fatalities recorded in road accidents within city limits in the given calendar year*1,00,000) / Population of the urban agglomeration in that year)			
Benchmark			
Thriving	**Striving**	**Surviving**	
< =2 person	3-6 person	> 6 persons	

*SLBs for Urban Transport- MoUD, Government of India

Indicator 18/70

PERCENTAGE OF TRAFFIC INTERSECTIONS WITH SAFE PEDESTRIAN CROSSING ON MAJOR ROADS

Definition
Percentage of traffic intersections with safe pedestrian crossing facilities (more than 2 mts, as per IRC) with the overall junctions in the city.

Rationale for the Indicator
It is critical that ITCs are crossing safely at junctions that is convenient for them to access to the ITC key destinations. A neighbourhood planned for ITCs has minimum 2 mts width of pedestrian crossing at the junction and is signalised. The presence of these within the neighbourhood enhances safer access while walking, cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Total signalised traffic intersections in the city with crossing facilities (more than 2 mts, as per IRC), total traffic intersections in the city	Once annually	City
Reliability of Measurements			
TBD			
Formula- (Numerator- Total signalised traffic intersections in the city with crossing facilities (more than 2 mts, as per IRC) Denominator- total traffic intersections in the city) x 100			
Benchmark Value			
Thriving	**Striving**	**Surviving**	
Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources			

Indicator 19/70

PERCENTAGE OF CHILDREN (0-14) FATALITIES BECAUSE OF ROAD CRASHES

Definition

Percentage of children (0-14yrs) fatalities because of road crashes to the total of overall road fatalities in the city

Rationale for the Indicator

Road crashes and understanding the overall fatalities between the children age group (0- 14yrs) and the overall road fatalities is important for understanding the vulnerable situation of children in the city. To understand the blackspots in the city, while accessing the public amenities like school, kindergartens, playground, park and health services.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Transport related fatalities in Children (0-14), Road fatalities in the city	Once annually	City
Reliability of Measurements			
TBD			
Formula- (Numerator- Transport related fatalities in Children (0-14) Denominator- Total Road fatalities in the city) x 100			
Benchmark Value*			
Thriving	**Striving**	**Surviving**	
Less than 20% of children (0-14) fatalities because of road crashes	20 - 60% of children (0-14) fatalities because of road crashes	More than 60% of children (0-14) fatalities because of road crashes	

*SLBs for Urban Transport- MoUD, Government of India

Indicator 20/70

PERCENTAGE OF CAREGIVERS AND INFANTS/ TODDLERS WALKING TO PUBLIC AMENITIES PER DAY (DAY CARE CENTRES, PREPRIMARY AND PRIMARY SCHOOLS, PRIMARY HEALTH FACILITIES, LOCAL MARKETS)

Definition

Percentage of ITCs as a percentage of the total number of ITCs within a neighbourhood walk to public amenities like school/kindergartens, playgorund, park, health services

Rationale for the Indicator

It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as daycare, health centres, parks and other amenities. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Survey	Once annually	Neighbourhood

Reliability of Measurements			
On-site pedestrian survey covering all public amenities (schools/kindergartens, playground, parks, health services)	On-site pedestrian survey of specific public amenities as averages.	Desk based estimation For example - based on earlier pedestrian count assignment and with systematic on-site verification.	Desk based estimation For example - based on earlier assignments like Non Motorised Plan.

Benchmark Value*		
Thriving	**Striving**	**Surviving**
100% caregivers and infants/toddlers walking to public amenities and spend <15 mins in walking per day	50% - 99% caregivers and infants/toddlers walking to public amenities and spend 15 to 30 mins in walking per day	Less than 50% caregivers and infants/toddlers walking to public amenities and spend lmore than 30 mins in walking per day

* Pt.8.4.10.2 Amenities, *Page 368,* URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 21/70

PROVISION AND QUANTITY OF PUBLIC SEATING TO STOP AND REST, BY NEIGHBOURHOOD

Definition
The average distance between resting points (e.g. benches, informal seating) within a neighbourhood.
The number of resting points that are comfortable and inclusive (sheltered, providing for different abilities) as a% of the total number of resting points.

Rationale for the Indicator
Streets need to be comfortable places to dwell; enabling ITCs people to sit comfortably contributes to this as well as to natural surveillance and ensuring street environments are inclusive for people who cannot walk long distances without a rest. The recommended spacing between resting points is driven by the average comfortable walking distances of the least mobile.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
m /%	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Observational survey of resting points by neighbourhood.	Observational on-site survey of specific routes/ destinations as averages.	Desk based counts of resting points with systematic on-site verification.	Desk based counts of resting points For example - based on aerial imagery.

Benchmark Value*		
Thriving	**Striving**	**Surviving**
Less than 50m between resting points. And >50% of route do have provision for resting points.	50 - 150m between resting points. And 30% - 50% of route do have provision for resting points.	More than 150m between resting points. And <30% of resting points meet quality criteria.

* Pt.8.4.10.2 Amenities, *Page 368*, URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 22/70

PERCENTAGE OF STREETS WITH ADEQUATE LIGHTING

Definition
Street area covered by adequate lighting as a percentage of total area.

Rationale for the Indicator
Street lighting and lighting in parks is important for ensuring that ITCs walking and cycling can see their way and can feel safe. The ambience of the lighting also affects how relaxed they feel. Consider interactivity, visibility, ambience and safety.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all street at neighbour-hood level	Sample survey at all street at neighbourhood level as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% of street area with adequate lighting facilities with >= 8 lux	99- 50% of street area with adequate lighting facilities with 6- 8 lux	Less than 50% of street area with adequate lighting facilities with 6- 8 lux

Indicator 23/70

STREET LIGHT SPACING IN A NEIGHBOURHOOD

Definition
The distance between poles should not be more than 30 m.

Rationale for the Indicator
Street lighting and lighting in parks is important for ensuring that ITCs who are either walking or cycling can see their way and feel safe. The ambience of the lighting also affects how relaxed they feel. Consider interactivity, visibility, ambience and safety.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
Meters	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all street at neighbourhood level	Sample survey at all street at neighbourhood level as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value		
Thriving	**Striving**	**Surviving**
~100% of street area with light poles spacing not more than 30 m	~80% with light poles spacing not more than 30 m	~ 50% street area with light poles spacing not more than 30 m

* SLBs for Urban Transport- MoUD, Government of India

Indicator 24/70

ENCROACHMENT ON NMT SECTIONS OF ROADS AT NEIGHBOURHOOD LEVEL BY VEHICLE PARKING

Definition
Area encroached by vehicular parking out of the total NMT dedicated roads.

Rationale for the Indicator
Street lighting and lighting in parks is important for ensuring that ITCs walking and cycling can see their way and can feel safe. The ambience of the lighting also affects how relaxed they feel. Consider interactivity, visibility, ambience and safety.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at major routes to public facilties like park , school, health centre	Sample survey at selected major routes public facilties like park , school, health centre	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value*		
Thriving	**Striving**	**Surviving**
Width >= 3M Less than <= 10% of total NMT roads	Width between 3m and 1.8m 10-20% of NMT routes do have continuous footpath and meet quality criteria	Width less than 1.8m > 20% of NMT routes do have continuous footpath and meet quality criteria

* SLBs for Urban Transport- MoUD, Government of India

Indicator 25/70

PRESENCE OF TRAFFIC CALMING MEASURES IN THE NEIGHBOURHOOD AND AVERAGE SPEED OF VEHICLES IN THE NEIGHBOURHOOD

Definition

Traffic calming uses physical design and other measures to improve safety for motorists, pedestrians and cyclists. Urban planners and traffic engineers have many strategies for traffic calming, including narrowed roads and speed humps.

Rationale for the Indicator

Traffic, regardless of the speed it is travelling at, affects how safe and relaxing the street feels and contributes to the severance effect of the street. Even slow-moving traffic affects the safety and ease of crossing, walking and cycling for ITCs.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y / n	Observation	Once annually	Neighbourhood
Reliability of Measurements			
Comprehensive survey at major routes to public facilties like park, school, health centre	Sample surveyat selected major routes public facilties like park, school, health centre	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information
Benchmark Value*			
Thriving	**Striving**	**Surviving**	
Yes and less than 10kmph	Yes and 10-20 kmph	No and more than 20 kmph	

* Pt.8.2.2.1 Design Speed & Space Standard, *Page 285*, URDPFI Guidelines 2014, MoUD ; Urban Street Design Guidelines, UTTIPEC; Urban Road, Code of Practice Part 1, MoUD.

Indicator 26/70

PERCENTAGE OF TREE COVER ON MAJOR STREETS IN A NEIGHBOURHOOD

Definition
Streets or pedestrian ways shaded by continuous trees at minimum distance of 8-12m

Rationale for the Indicator
Trees can contribute to making streets feel more relaxing and more attractive places to walk, cycle and use public transport. Tree cover contributes to shade from sunshine and protection from rain. In some cases trees can also help remove some pollutants from the air, provide a buffer for dust and improve the perception of noise. The wider benefits of trees in mitigating the impacts of climate change through CO2 capture is also important to retaining mature trees and planting new ones.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y/n, No.	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Observational on-site survey of all major routes in neighbourhood	Observational on-site survey of selected major routes as averages	Desk based estimation For example - based on existing landuse maps and with systematic on-site verification.	Desk based estimation For example - based on aerial imagery

Benchmark Value		
Thriving	**Striving**	**Surviving**
No Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		

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PARKS AND OPEN SPACES

Objectives Achieved	City level indicators
	27. Number of good quality housing area park spaces in the city (Core) 28. Number of good quality neighbourhood park spaces in the city (Core)
	29. Per Capita organised green open space in the city (Core)
	30. % of parks at the city level with free public drinking water, toilets and other facilities for families (Core)
	Neighbourhood level indicators
	31. Number of Tot-lots with play equipment (Supporting)
	32. Number of hours per day open areas is occupied in a neighbourhood. Tot-lot, housing area park, neighbourhood playground (Supporting) % of infants, toddlers and their caregivers among all users of the park. (Core) 34. % of area in parks dedicated to play spaces suitable for young children 0-5 yrs old.(Core) 35. Presence if natural materials in play equipment (y/n) play space (y/n), natural areas (e.g. greenery, sand, safe and clean water) as percentage of total play space. (Core) 36. Number of parks that have quality seating facing 0-3 play areas (Core)
	37. % of parks with adequate lighting (Supporting) 38. Presence of stray animals in parks (Supporting)
	39. Percentage distribution of Children engaged in formal and informal play in organised green spaces (Supporting)

Indicator 27/70

NUMBER OF GOOD QUALITY HOUSING AREA PARK SPACES IN THE CITY

Definition
A park is an area of natural, semi-natural or planted space set aside for human enjoyment and recreation. Good quality small parks should contain shaded area, landscaped area, bright cloured equipment, comfortable seating areas, cleanliess and safety.

Rationale for the Indicator
Open spaces are ideal places for ITCs to socialise, play and interact. Accessible good quality parks should be provided to promote outdoor activities for ITCs, connection to nature and climate resilience. The number and amount of different park spaces indicates the range of opportunities and the sufficiency of provision for the community.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
No.	Sample survey and auditing	Once annually	City

Reliability of Measurements			
Comprehensive survey at ward level. Auditing of elements and features such as permeable wall, age appropriate play, public amenities, universal accessibility, green cover etc.	Sample survey at specific park locations across wards	Desk based estimation For example - based on earlier survey and with systematic on-site verification	Desk based estimation For example - based on existing maps like Landuse map

Benchmark Value*		
Thriving	**Striving**	**Surviving**
More than 4 and total area more than 15,000 Sqm	3 - 4 and total area of 15000 Sqm	Less than 3 and total area less than 15000 Sqm

* Pt.8.4.5. Open Spaces, *Page 362-63,* URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 28/70

NUMBER OF GOOD QUALITY NEIGHBOURHOOD PARK SPACES IN THE CITY

Definition
A park is an area of natural, semi-natural or planted space set aside for human enjoyment and recreation. Good quality large parks should contain dedicated areas for different users, shaded area, landscapes spaces, bright cloured equipment,comfortable seating areas, cleaness, safety, public facilities like drinking water, toilets etc.

Rationale for the Indicator
Open spaces are ideal places for ITCs to socialise, play and interact. Accessible good quality parks should be provided to promote outdoor activities for ITCs, connection to nature and climate resilience. The number and amount of different park spaces indicates the range of opportunities and the sufficiency of provision for the community.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
No.	Sample Survey	Once annually	City

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on existing maps like Landuse map.

Benchmark Value*		
Thriving	**Striving**	**Surviving**
More than 4 with total area more than 10,000 Sqm	1 of 10,000 sqm OR 1-4 of total Area of 10,000 Sqm	Less than 1 with total area less than 10,000 Sqm

* Pt.8.4.5. Open Spaces, *Page 362 -63,* URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 29/70

PER CAPITA ORGANISED GREEN OPEN SPACE IN THE CITY

Definition
Average per person area under open spaces including underitlised land, organised gree and other common open spaces but excluding flood plains, forest cover etc.

Rationale for the Indicator
Open spaces are ideal places for ITCs to socialise, play and interact. Accessible good quality parks should be provided to promote outdoor activities for ITCs, connection to nature and climate resilience. The number and amount of different park spaces indicates the range of opportunities and the sufficiency of provision for the community.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
Sqm.	Existing Data	Once annually	City

Reliability of Measurements			
Based on Latest published landuse report	Selected landuse survey at specific housing blocks as averages and based on old ULB landuse report	Desk based estimation For example - based on Old landuse report	Desk based estimation For example - based on earlier data

Benchmark Value*		
Thriving	**Striving**	**Surviving**
More than 4 sqm. open space per person	3 -4 sq.m. open space per per son	Less than 3 sqm. open space per person

* Pt.8.4.5. Open Spaces, *Page 362* , URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 30/70

PERCENTAGE OF PARKS AT CITY LEVEL WITH FREE PUBLIC DRINKING WATER, TOILETS AND OTHER FACILITIES

Definition
No of parks out of total with the provision of basic facilities like drinking water, toilets and other facilties for families

Rationale for the Indicator
Basic facilities, such as toilets and drinking water are needed for both caregivers and young children. They support comfort levels and ultimately enable ITCs to spend time together outdoors for longer.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	City

Reliability of Measurements			
Observational on-site survey of all public park facilities	Observational on-site survey of specific park facilties as averages	Desk based estimation For example - based on existing information and with systematic on-site verification.	Desk based estimation For example - based on approval park layout maps

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% park with basic basic facilities like drinking water, toilets and other facilties for families.	50 - 99% with basic basic facilities like drinking water, toilets and other facilties for families.	Less than 50% with basic basic facilities like drinking water, toilets and other facilties for families.

Indicator 31/70

NUMBER OF TOT LOTS WITH PLAY EQUIPMENT

Definition
Number of children's parks or tot lots developed per year at neighbourhood level. Children's Park - an open space frequently used by ITCs and usually equipped with facilities for play and recreation especially by children.

Rationale for the Indicator
Open spaces are ideal places for ITCs to socialise, play and interact. Accessible good quality parks should be provided to promote outdoor activities for ITCs, connection to nature and climate resilience. The number and amount of different park spaces indicates the range of opportunities and the sufficiency of provision for the community.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
No.	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Observational on-site survey of all children park	Observational on-site survey of specific children park	Desk based estimation For example - based on existing maps and with systematic on-site verification.	Desk based estimation For example - based on existing maps

Benchmark Value*		
Thriving	**Striving**	**Surviving**
More than 6	4 - 6	Less than 6

* Pt.8.4.10.2 Amenities, *Page 368,* URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 32/70

NUMBER OF HOURS PER DAY OPEN AREAS ARE OCCUPIED IN A NEIGHBOURHOOD.

Definition
Average duration per day organised green spaces (Tot-lot, housing area park, neighbourhood playground) are occupied by ITCs

Rationale for the Indicator
How well used parks and playspaces are by ITCs and the duration of their stay is an indication of the quality of play and social contact when it happens in outdoor settings. Interaction through activities like play and connection to nature supports children's development and provides opportunity for safe, pleasant, friendly interactions in the community which can contribute to reduced stress.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
Hours	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Observational survey of all park at neighbourhood.	Observational on-site survey of specific park as averages.	Desk based estimation For example - based on existing and earlier information and with systematic on-site verification.	Desk based estimation For example -based on infromation.

Benchmark Value*		
Thriving	**Striving**	**Surviving**
More than 120 mins / 2 hours - average green spaces occupied daily	60 - 120 mins - average green spaces occupied daily	Less than 60 mins - average hours green spaces occupied

* International benchmarks.

Indicator 33/70

PERCENTAGE OF ITCs AMONG ALL USERS OF THE PARK

Definition
Area out of total park utilised by ITCs on their visit to organised green spaces.

Rationale for the Indicator
How well used parks and playspaces are by ITCs and the duration of their stay is an indication of the quality of play and social contact when it happens in outdoor settings. Interaction through activities like play and connection to nature supports children's development and provides opportunity for safe, pleasant, friendly interactions in the community which can contribute to reduced stress.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Observational survey of all park at neighbourhood.	Observational on-site survey of specific park as averages.	Desk based estimation For example - based on existing and earlier information and with systematic on-site verification.	Desk based estimation For example - based on information.

Benchmark Value		
Thriving	**Striving**	**Surviving**
Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on neighbourhood population and surveys		

Indicator 34/70

PERCENTAGE OF AREA IN PARKS DEDICATED TO PLAY SPACES SUITABLE FOR YOUNG CHILDREN 0-5

Definition
Existing park area for young children as a% of the total park area

Rationale for the Indicator
Play opportunities in the neighbourhood should be available for all age groups. Children under 0-3 have particular sensitivities and interactions that can be neglected in playspace design. Providing opportunities specifically for this group will enable ITCs interactions early on.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value		
Thriving	**Striving**	**Surviving**
There is more than 10% of existing park area dedicated to young children (0-5 years)	There is 10 - 5% of existing park area dedicated to young children (0-5 years)	There is less than 5% of existing park area dedicated to young children (0-5 years)

Indicator 35/70

PRESENCE OF NATURAL MATERIALS IN PLAY EQUIPMENT BY PLAY SPACE, PRESENCE OF NATURAL AREAS AS % OF TOTAL PLAY SPACE

Definition
Existence of natural environment / material in play space and natural area as a % of total playable area

Rationale for the Indicator
Regular exposure to nature has been found to have positive benefits on the health of children, Natural materials are eco-friendly, cheap, easy-to-find and they can offer children a unique experience: to get contact with nature and the materialisation natural objects have: textures, smells, properties and colours. Contact with such elements can also stimulate their learning ability in a very creative way.

<table>
<tr><th>Units</th><th colspan="2">Data Requirements</th><th>Frequency of Measurements</th><th>Jurisdiction of Measurements</th></tr>
<tr><td>y/n,%</td><td colspan="2">Observation</td><td>Once annually</td><td>Neighbourhood</td></tr>
<tr><th colspan="5">Reliability of Measurements</th></tr>
<tr><td colspan="2">Observational survey of all playable space at neighbourhood.</td><td>Observational on-site survey of specific playable area as averages.</td><td>Desk based estimation For example -based on existing and earlier information and with systematic on-site verification.</td><td>Desk based estimation For example -based on earlier information.</td></tr>
<tr><th colspan="5">Benchmark Value</th></tr>
<tr><th colspan="2">Thriving</th><th>Striving</th><th colspan="2">Surviving</th></tr>
<tr><td colspan="5">Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources</td></tr>
</table>

Indicator 36/70

NUMBER OF PARKS THAT HAVE QUALITY SEATING, FACING 0-3 PLAY AREAS

Definition
Number of parks at neighbourhood with the provision of quality seating oriented towards 0-3 play areas.

Rationale for the Indicator
Public spaces that cater for social interaction and informal opportunities to look out for infants and toddlers provide opportunities for greater freedom and enjoyment for both caregivers and young children, it can also contribute to shared care.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
No.	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Observational survey of all park at neighbourhood.	Observational on-site survey of specific park as averages.	Desk based estimation For example -based on existing and earlier information and with systematic on-site verification.	Desk based estimation For example -based on layout plan

Benchmark Value*		
Thriving	**Striving**	**Surviving**
There is more than 4 parks at neighbourhood level with the provision of quality seating and oriented towards 0-3 play areas	4 - 2 parks at neighbourhood level with the provision of quality seating and oriented towards 0-3 play areas	Less than 2 park at neighbourhood level with the provision of quality seating and oriented towards 0-3 play areas

* *Page 7,* Urban Greening Guidelines, TCPO, GoI, MoUD

Indicator 37/70

PERCENTAGE OF PARKS WITH ADEQUATE LIGHTING

Definition
Park area covered by adequate lighting as a percentage of total area.

Rationale for the Indicator
Street lighting and lighting in parks is important for ensuring that ITCs walking and cycling can see their way and can feel safe. The ambience of the lighting also affects how relaxed they feel. Consider interactivity, visibility, ambience and safety.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example -based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% of park area with adequate lighting facilities	50 - 99% of park area with adequate lighting facilities	Less than 50% of park area with adequate lighting facilities

Indicator 38/70

PRESENCE OF STRAY ANIMALS IN PARKS

Definition
Existence of stray animal in the parks

Rationale for the Indicator
Stray animals can be a safety risk for infants and toddlers and contribute to the comfort and perceived safety of spending time in parks for caregivers.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y / n	Observation	Quarterly	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing area park	Sample survey at specific housing area park as averages	Desk based estimation For example -based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value		
Thriving	Striving	Surviving
Not Applicable		

Indicator 39/70

PERCENTAGE DISTRIBUTION OF CHILDREN ENGAGED IN FORMAL AND INFORMAL PLAY IN ORGANISED GREEN SPACES

Definition
Distribution of daily children times between formal and informal play areas in a organised green space

Rationale for the Indicator
Playing is a prime activity for small children. For the 0-5 age group especially, playing is a way to have fun, to socialise but also to learn and develop. Outdoor play gives children physical exercise, closer contact with nature and a means of socialising with their peers and with caregivers. Consideration should be given to informal play, from the door step exploring out to the street and neighbourhood in a stimulating and sensory way as well as providing opportunities for formal play such as in parks and playspaces.

<table>
<tr><th>Units</th><th colspan="2">Data Requirements</th><th>Frequency of Measurements</th><th>Jurisdiction of Measurements</th></tr>
<tr><td>%</td><td colspan="2">Sample Survey</td><td>Half Yearly</td><td>Neighbourhood</td></tr>
<tr><th colspan="5">Reliability of Measurements</th></tr>
<tr><td colspan="2">Comprehensive survey at all housing blocks/cluster</td><td>Sample survey at specific housing blocks as averages</td><td>Desk based estimation For example -based on earlier survey and with systematic on-site verification.</td><td>Desk based estimation For example - based on earlier survey / information</td></tr>
<tr><th colspan="5">Benchmark Value</th></tr>
<tr><th colspan="2">Thriving</th><th>Striving</th><th colspan="2">Surviving</th></tr>
<tr><td colspan="5">Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on children footfall and surveys</td></tr>
</table>

MOBILITY

Objectives Achieved	City level indicators
	40. % of daily trips by non-motorised means (Supporting) 41. Percentage of non-motorised transport network coverage in the city. (Core) 42. Service coverage of public transport in the city. (Core) 43. % neighbourhood area with transit stops in walkable distance. (Supporting)
	44. Percentage of transit stops with ITC supportive elements (Shaded seating, Playful elements, Public toilets, Nursing station) within 100mts. (Supporting)
	Neighbourhood level indicators
	45. % of journey destined at creche/ kindergarten/ play school is by walking or cycling (Supporting) 46. Percentage of Anganwadi centres having public transit stops within 300m (Supporting)

Indicator 40/70

PERCENTAGE OF DAILY TRIPS BY NON-MOTORISED MEANS

Definition
Non-motorised means of transport includes mainly cycling , walking and cycle rickshaws. percentage of non-motorised trips as a percentage of the total number of daily trips

Rationale for the Indicator
It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as daycare, health centres, parks and other amenities. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Survey	Once annually	City

Reliability of Measurements			
Comprehensive traffic survey at all routes/destination	Traffic survey at specific routes/destination as averages	Desk based estimation For example - based on earlier assignment and with systematic on-site verification.	Desk based estimation For example - based on earlier assignment like Comprehensive mobility Plan.

Benchmark Value		
Thriving	**Striving**	**Surviving**
More than 50% of daily trips by NMT	25-50% of daily trips by NMT	Less than 25% of daily trips by NMT

* Page *3* , SLBs for Urban Transport- MoUD, Government of India

Indicator 41/70

PERCENTAGE OF NON MOTORISED TRANSPORT NETWORK COVERAGE IN THE CITY

Definition
Percentage of coverage of Non-Motorised transport, which includes the overall existing footpaths, bicycle tracks, total length of pedestrianised streets to the overall road network in the city.

Rationale for the Indicator
It is critical that ITCs are able to access all parts of a city easily and conveniently. A neighbourhood planned for ITCs has a mix of modes of transport that help the ITCs to access outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as day-care, health centres, parks and other amenities. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Modal split (by modes of transport: Walking and Cycling)	Once annually	City

Reliability of Measurements			
On-site pedestrian survey covering all public amenities (schools/kindergartens, playground, parks, health services)	On-site pedestrian survey of specific public amenities as averages	Desk based estimation For example - based on earlier pedestrian count assignment and with systematic on-site verification.	Desk based estimation For example - based on earlier assignments like Non Motorised Plan.

Formula-

(Pedestrian and Bicycle) in the city% NMT = Numerator - 0.5 x (Length of footpath in a city x 2 if both sides of the road/ length of major road network x 2)x 100 + 0.5 x (Length of cycle network in city x 2 if both sides of the road /
Denominator- length of major road network x 2)x 100 *

Benchmark Value*		
Thriving	**Striving**	**Surviving**
More than or equal to 50% of non-motorised transport network coverage in the city	49 – 15% of non-motorised transport network coverage in the city	Less than 15% of non-motorised transport network coverage in the city

* Page 23, SLBs for Urban Transport- MoUD, Government of India

Indicator 42/70

SERVICE COVERAGE OF PUBLIC TRANSPORT IN THE CITY

Definition
Ratio of public transport corridor in the city limits to the overall city limits

Rationale for the Indicator
Offering choice to ITCs in active, safe and pleasant travel modes can cater for greater freedom and ease of journeys through the neighbourhood. Considerations include the quality access of public transport coverage in the city

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
No.	Total length in road kms of the corridors on which public transport systems ply in the city, total road length of the city and area of the city	Once annually	City

Reliability of Measurements			
Comprehensive survey and mapping at all ward level	Mapping of all street routes and transit stops across all wards	Desk based mapping and on ground verification plus spatial analysis to understand accessibility and coverage	GIS mapping and accessibility analysis + people's perception and validation

Formula-
Service coverage = Length of bus route network length in the city / Area of the urban limits of the city.

Benchmark Value*		
Thriving	**Striving**	**Surviving**
More than equal to 1 service coverage	0.9 - 0.3 service coverage	Less than 0.3 service coverage

* Page *20* , SLBs for Urban Transport- MoUD, Government of India

Indicator 43/70

PERCENTAGE NEIGHBOURHOOD AREA WITH TRANSIT STOPS IN WALKABLE DISTANCE

Definition
Percentage of neighbourhood area with transit stop accessible within 300-500m distance

Rationale for the Indicator
Offering choice to ITCs in active, safe and pleasant travel modes can cater for greater freedom and ease of journeys through the neighbourhood. Considerations include the quality access of public transport coverage in the city

<table>
<tr><th>Units</th><th colspan="2">Data Requirements</th><th>Frequency of Measurements</th><th>Jurisdiction of Measurements</th></tr>
<tr><td>%</td><td colspan="2">Spatial mapping</td><td>Once annually</td><td>Neighbourhood</td></tr>
<tr><th colspan="5">Reliability of Measurements</th></tr>
<tr><td colspan="2">Comprehensive survey and mapping at all ward level</td><td>Mapping of all street routes and transit stops across all wards</td><td>Desk based mapping and on ground verification plus spatial analysis to understand accessibility and coverage</td><td>GIS mapping and accessibility analysis + people's perception and validation</td></tr>
<tr><td colspan="5">Formula-
Spatial analysis of pedshed of all transit stops along with residential areas</td></tr>
<tr><th colspan="5">Benchmark Value*</th></tr>
<tr><th colspan="2">Thriving</th><th>Striving</th><th colspan="2">Surviving</th></tr>
<tr><td colspan="5">Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources</td></tr>
</table>

Indicator 44/70

PERCENTAGE OF TRANSIT STOPS WITH ITC SUPPORTIVE ELEMENTS (SHADED SEATING, PLAYFUL ELEMENTS, PUBLIC TOILETS, NURSING STATIONS)

Definition

Number of public transit stops and stations with yonug children and caregiver centric amenites amonst all transit stops in the city

Rationale for the Indicator

The presence of ITC elements such as dedicated and shaded seating, playful elements and areas, public family toilets, lactation rooms and diaper changing stations, can significantly improve the passenger experience. This can make waiting for transit less stressful and more comfortable, encouraging caregivers to choose public transportation more often. ITC elements can address the needs of diverse user groups, including families with young children, elderly passengers, and people with disabilities.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Total transit stops with ITC friendly features Total transit stops in the city	Once annually	City

Reliability of Measurements			
Comprehensive survey, audits and mapping of all transit stops and stations in the city	Mapping of all street routes and transit stops across all wards	Desk based mapping and on ground verification plus spatial analysis to understand accessibility and coverage	GIS mapping and accessibility analysis + people's perception and validation

Formula-
=(Total number of transit stops/stations suitable for ITC / Total number of transit stop/stations in the city) x 100

Benchmark Value*

Thriving	Striving	Surviving
>=50% of Percentage of transit stops with ITC supportive elements	50 - 25% of Percentage of transit stops with ITC supportive elements	< 25% of Percentage of transit stops with ITC supportive elements

Indicator 45/70

PERCENTAGE OF JOURNEY DESTINED AT CRECHE / KINDERGARTEN / SCHOOL BY WALKING OR CYCLING

Definition
Percentage of non motorised trips destined at creche/kindergarten as a percentage of the total number of non motorised daily trips.

Rationale for the Indicator
It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as daycare, health centres, parks and other amenities. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Survey	Once annually	Neighbourhood

Reliability of Measurements			
On-site NMT survey at all routes/destination covering creche, and kindergartens,	On-site NMT survey of Specific routes/destinations as averages.	Desk based estimation For example - based on earlier NMT assignments and with systematic on-site verification.	Desk based estimation For example - based on earlier assignments like Non Motorised Plan.

Benchmark Value		
Thriving	**Striving**	**Surviving**
More than 40% of daily NMT trips destined at creche / kindergarten / school	25 - 40% of daily NMT trips destined at creche / kindergarten / school	Less than 25% of daily NMT trips destined at creche / kindergarten / school

Indicator 46/70

PERCENTAGE OF ANGANWADI CENTRE HAVING PUBLIC TRANSIT STOPS WITHIN 300 MTS

Definition

Well-designed neighbourhoods encourage infants, toddlers and caregivers to access to nearby ITC social infrastructure facilities i.e. anganwadi centres, daycare, health centres and parks. The number of social infrastructure facilities within the range of 300 m distance of public transit stops.

Rationale for the Indicator

It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs has social infra facilities i.e. There are key destinations that ITCs may go to on a regular basis such as day-care, health centres, parks and other amenities within comfortable walking distances.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Spatial mapping	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey and mapping at all ward level	Mapping of all anganwadi centre and transit stops across all wards	Desk based mapping and on ground verification plus spatial analysis to understand accessibility and coverage	GIS mapping and accessibility analysis + people's perception and validation

Formula-

Spatial analysis of pedshed of 300m from all anganwadi centre and mapping of all transit stops falling in it

Benchmark Value*

Thriving	Striving	Surviving
Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		

SOCIAL INFRASTRUCTURE

Objectives Achieved	City level indicators
	47. Presence of Anganwadis with health clinics in the city (y/n) (Core)
	Neighbourhood level indicators
	48. Total Number of private kindergartens in the neighbourhood and whether they have attached outdoor space (Core)
	49. % of Government schools that allow usage of school campuses during non-school hours (Core)

Indicator 47/70

PRESENCE OF ANGANWADI CENTRE WITH HEALTH CLINICS IN THE CITY

Definition
An Anganwadi centre is the focal point for delivery of ICDS services to children and mothers. An Anganwadi centre normally covers a population of 1000 in urban areas.

Healthy lifestyles require support from services such as health clinics, particularly in early childhood development. Health clinics may be frequently visited by ITCs and can provide anchors of the community and activity in the neighbourhood.

Rationale for the Indicator

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y / n	Observation	Once annually	City

Reliability of Measurements			
Observational on-site survey of all operational Anganwadi centre at neighbourhood level	Observational on-site survey of specific routes/ destination covering existing and operational anganwadi centre as average	Desk based counts of anganwadi centres with systematic on-site verification.	Desk based counts of anganwadi centres For example - Government documents

Benchmark Value*		
Thriving	**Striving**	**Surviving**
There are more than 7 Anganwadi centres in the city of 1,00,000 population	There are 5 to 7 Anganwadi centres in the city of 1,00,000 population	There are less than 5 Anganwadi centres in the city of 1,00,000 population

* Pt.8.4.4 Socio-Cultural, *Page 361*, URDPFI Guidelines 2014, Ministry of Urban Development

Indicator 48/70

TOTAL NUMBER OF PRIVATE KINDERGARTENS IN THE NEIGHBOURHOOD AND DO THEY HAVE ATTACHED OUTDOOR SPACE

Definition
Kindergarten is a day-care service offered to children from age three until the child starts attending school. The number of operational private kindergarten available at neighbourhood level

Rationale for the Indicator
It is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently. A neighbourhood planned for ITCs and their caregivers has a mix of uses and services that give reasons to be outdoors and within comfortable walking distances. There are key destinations that ITCs may go to on a regular basis such as daycare, health centres, parks and other amenities. The presence of these within the neighbourhood enhances their accessibility, through travel modes such as walking and cycling.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y/n, no	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Observational on-site survey of all operational private kindergarten	Observational on-site survey of specific routes/ destination covering existing and operational kindergarten	Desk based counts of private kindergarten with systematic on-site verification.	Desk based counts of private kindergarten For example - based on aerial imagery.

Benchmark Value		
Thriving	**Striving**	**Surviving**
Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		

Indicator 49/70

PERCENTAGE OF GOVERNMENT SCHOOLS THAT ALLOW USAGE OF SCHOOL CAMPUSES DURING NON-SCHOOL HOURS

Definition
Percentage of government schools out of total number of government schools that allow multi usage of school campuses during non-school hours

Rationale for the Indicator
Extending the use of frequently visited destinations for ITCs such as government school campuses to the wider community can provide extra opportunities, space and accessibility for time spent outdoors.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Half Yearly	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% government school allow usage of school campuses during non-school hours	50 - 99% government school allow usage of school campuses during non-school hours	< 50% government school allow usage of school campuses during non-school hours

URBAN SERVICES

Objectives Achieved	City level indicators
	50. Household level coverage of SWM services through door-to-door collection of waste (Core) 51. Household level coverage of SWM services through door-to-door collection of waste in informal settlements (Core) 52. Quality of water supplied to a household in the neighbourhoods (Supporting) 53. Quality of water supplied to household in informal settlements (Supporting)
	Neighbourhood level indicators
	54. % neighbourhood area with public toilets within 500m distance (Supporting) 55. % neighbourhood area with Women public toilets within 500m distance (Supporting)
	56. % of road length with storm water drains. (Supporting) 57. % of parks and open spaces within the neighbourhood with rainwater harvesting systems (Core) 58. % of anganwadis PHCs, schools and other public buildings within the neighbourhood with rainwater harvesting systems (Core) 59. Presence of lighting with renewable energy source in and around housing parks (Supporting)

Indicator 50/70

HOUSEHOLD LEVEL COVERAGE OF SWM SERVICES THROUGH DOOR-TO-DOOR COLLECTION OF WASTE

Definition
Percentage of households that are covered by daily door-step collection system.

Rationale for the Indicator
Since infants and toddlers explore with all the senses, clean outdoor environments can reduce concerns Having waste free clean roads and drains by door-to-door collection of waste will support more outdoors activities for both caregivers and young children.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Monthly	City

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey

Benchmark Value*		
Thriving	**Striving**	**Surviving**
100% households covered by daily door-step collection system.	50 - 99% households covered by daily door-step collection system.	Less than 50% households covered by daily door-step collection system.

* SLBs, Ministry of Urban Development, GoI

Indicator 51/70

HOUSEHOLD LEVEL COVERAGE OF SWM SERVICES THROUGH DOOR-TO-DOOR COLLECTION OF WASTE IN INFORMAL SETTLEMENTS

Definition
Percentage of households that are covered by daily door-step collection system.

Rationale for the Indicator
Since infants and toddlers explore with all the senses, clean outdoor environments can reduce concerns Having waste free clean roads and drains by door-to-door collection of waste will support more outdoors activities for both caregivers and young children.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Monthly	Notified and non-notified slums

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey

Benchmark Value*		
Thriving	**Striving**	**Surviving**
100% households covered by daily door-step collection system.	50 - 99% households covered by daily door-step collection system.	Less than 50% households covered by daily door-step collection system.

* SLBs, Ministry of Urban Development, GoI

Indicator 52/70

QUALITY OF WATER SUPPLIED TO HOUSEHOLD IN NEIGHBOURHOODS

Definition
Percentage of water samples that meet or exceed the specified potable water standards as defined by CPHEEO.

Rationale for the Indicator
The quality of water supplied is as important a performance indicator as other service delivery indicators. Poor water quality can pose serious public health hazards. Water borne diseases are quite common in Indian cities and mainly in children.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Half Yearly	City

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% water sample meet potable water standards	50 - 99% water sample meet potable water standards	Less than 50% water sample meet potable water standards

* SLBs, Ministry of Urban Development, GoI

Indicator 53/70

QUALITY OF WATER SUPPLIED TO HOUSEHOLD IN INFORMAL SETTLEMENTS

Definition
Percentage of water samples that meet or exceed the specified potable water standards as defined by CPHEEO.

Rationale for the Indicator
The quality of water supplied is as important a performance indicator as other service delivery indicators. Poor water quality can pose serious public health hazards. Water borne diseases are quite common in Indian cities and mainly in children.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Half Yearly	Notified and non-notified slums

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% water sample meet potable water standards	50 - 99% water sample meet potable water standards	Less than 50% water sample meet potable water standards

* SLBs, Ministry of Urban Development, GoI

Indicator 54/70

PERCENTAGE NEIGHBOURHOOD AREA WITH PUBLIC TOILETS WITHIN 500M DISTANCE

Definition
Percentage of neighbourhood area with tpublic toilets accessible within 500m walkable distance

Rationale for the Indicator
Access to clean saitation facility is key to young children and caregiver comfort and hygiene when outdoors and in public spaces.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Spatial mapping	Half Yearly	Neighbourhood

Reliability of Measurements			
Comprehensive survey and mapping at all ward level	Mapping of all street routes and public toilets across all wards	Desk based mapping and on ground verification plus spatial analysis to understand accessibility and coverage	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value		
Thriving	**Striving**	**Surviving**
Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		

Indicator 55/70

PERCENTAGE NEIGHBOURHOOD AREA WITH WOMEN PUBLIC TOILETS WITHIN 500M DISTANCE

Definition
Percentage of neighbourhood area with twomen public toilets accessible within 500m walkable distance

Rationale for the Indicator
Access to clean saitation facility is key to young children and caregiver comfort and hygiene when outdoors and in public spaces. Research suggests women need to access toilet more than men given their biology and the fact that most often they are accompanied by their children.

<table>
<tr><th>Units</th><th>Data Requirements</th><th>Frequency of Measurements</th><th>Jurisdiction of Measurements</th></tr>
<tr><td>%</td><td>Spatial mapping</td><td>Half Yearly</td><td>Neighbourhood</td></tr>
<tr><th colspan="4">Reliability of Measurements</th></tr>
<tr><td>Comprehensive survey and mapping at all ward level</td><td>Mapping of all street routes and public toilets across all wards</td><td>Desk based mapping and on ground verification plus spatial analysis to understand accessibility and coverage</td><td>GIS mapping and accessibility analysis + people’s perception and validation</td></tr>
<tr><th colspan="4">Benchmark Value</th></tr>
<tr><th colspan="2">Thriving</th><th>Striving</th><th>Surviving</th></tr>
<tr><td colspan="4">Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources</td></tr>
</table>

Indicator 56/70

PERCENTAGE OF ROAD LENGTH WITH STORM WATER DRAINS

Definition
Number of incidence standing water, overflowing drains, sewage per kilometer of street network

Water management is a constant issue in cities, whether it is conservation of water in dry areas or preventing flooding during the monsoons or ensuring that water in the public realm is safe and appropriately accessible. In neighbourhoods it is important to have good drainage to prevent stagnant water and puddles from forming in the public realm where mosquitos can breed.

Rationale for the Indicator

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
No.	Spatial	Once annually	Neighbourhood
Reliability of Measurements			
Comprehensive survey and mapping at all street and neighbourhood level	Sample survey at selected street at neighbourhood level as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information
Benchmark Value			
Thriving	**Striving**	**Surviving**	
Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources			

Indicator 57/70

PERCENTAGE OF PARKS AND OPEN SPACES WITHIN THE NEIGHBOURHOOD WITH RAIN WATER HARVESTING SYSTEMS

Definition
Number of public buildings like parks, school and other public plots with rain water harvesting facility as percentage of total number of public buildings.

Rationale for the Indicator
Rainwater harvesting supports the resilience of the neighbourhood, helping to reduce external water demand, alleviating water stress, reducing non-point source pollution, reducing treatable urban runoff volume, prevent flooding and helping to alleviate climate change.

-

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% of public building and open spaces with rainwater harvesting facilities.	50-99% of public building and open spaces with rainwater harvesting facilities.	Less than 50% of public building and open spaces with rainwater harvesting facilities.

Indicator 58/70

PERCENTAGE OF ANGANWADI CENTRES, PHCS,SCHOOLS AND OTHER PUBLIC BUILDINGS WITHIN THE NEIGHBOURHOOD WITH RAIN WATER HARVESTING SYSTEMS

Definition

Percentage of water samples that meet or exceed the specified potable water standards as defined by CPHEEO.

Rationale for the Indicator

The quality of water supplied is as important a performance indicator as other service delivery indicators. Poor water quality can pose serious public health hazards. Water borne diseases are quite common in Indian cities and mainly in children.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Half Yearly	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% of anganwadi centres, PHCs, schools and other public buildings with rainwater harvesting facilities	50 - 99% of anganwadi centres, PHCs, schools and other public buildings with rainwater harvesting facilities	Less than 50% of anganwadi centres, PHCs, schools and other public buildings with rainwater harvesting facilities

Indicator 59/70

PRESENCE OF LIGHTING WITH RENEWABLE ENERGY SOURCE IN AND AROUND PARKS

Definition
Existence of solar lighting facilties in and around housing area parks.

Rationale for the Indicator
Provision of renewable energy contributes to cleaner, healthier and more resilient environments for ITCs to live and grow up in. A green and balanced neighbourhood is certainly saturated with renewable energy harvesting and distribution technologies.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y / n	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing area park	Sample survey at specific housing area park as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% of housing area parks with renewable source lighting.	100 - 50% of housing area parks renewable source lighting.	Less than 50% of housing area parks with renewable source lighting.

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AMBIENT ENVIRONMENT

Objectives Achieved	City level indicators
	60. Air Quality index in the city. (Core)
	Neighbourhood level indicators
	61. Average noise level at the neighbourhood level (in dB) (Supporting) 62. Presence of no honking zones in the neighbourhood. (Core) 63. RSPM (Size less than 10 microns) (Core)

Indicator 60/70

AIR QUALITY INDEX IN THE CITY

Definition
An air quality index (AQI) is a number used by government agencies to communicate to the public how polluted the air currently is or how polluted it is forecast to become.

Rationale for the Indicator
Visibly active maintenance programmes support how comfortable and welcoming public spaces are and encourage ITCs to spend time in public space and explore, especially women and girls. Considerations for maintenance include cleaning, upkeep of street furniture and playspaces, waste management, inclusivity policies and natural surveillance.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
No.	Existing Data	Once annually	City

Reliability of Measurements			
Based on published government notification	Based on government advisory report and pollution control board data	Desk based estimation For example - based on latest secondary sources	Desk based estimation For example - based on old secondary sources

Benchmark Value		
Thriving	**Striving**	**Surviving**
0-100 AQI	100-200 AQ	Above 200 AQI

Indicator 61/70

AVERAGE NOISE LEVEL AT THE NEIGHBOURHOOD LEVEL (IN DB)

Definition
Number of streets with decibel levels above standard 55 dB as of percentage of total number of streets inside the neighbourhood.

Rationale for the Indicator
ITCs are sensitive to noise. Lower noise levels promote interaction between infants, toddlers and caregivers and with their environment, contributing to intimacy, perceived safety and reduced stress levels.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Observation	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification.	Desk based estimation For example - based on earlier survey / information

Benchmark Value*		
Thriving	**Striving**	**Surviving**
Less than 5% of streets with decibel levels above standard 55 dB	5 - 10% of streets with decibel levels above standard 55 dB	More than 10% of streets with decibel levels above standard 55 dB

* Page 9, The Noise Pollution Regulation & Control Rules, 2000, Ministry of Environment & Forests

Indicator 62/70

PRESENCE OF NO-HONKING ZONES IN THE NEIGHBOURHOOD

Definition
Existence of silence zones in the neighbourhood.

Rationale for the Indicator
ITCs are sensitive to noise. Lower noise levels promote interaction between infants, toddlers and caregivers and with their environment, contributing to intimacy, perceived safety and reduced stress levels.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y / n	Existing Data	Once annually	Neighbourhood

Reliability of Measurements			
Based on published government notification	Based on government advisory report	Desk based estimation For example - based on latest secondary sources	Desk based estimation For example - based on old secondary sources

Benchmark Value*		
Thriving	Striving	Surviving
Not Applicable		

* Page 6, The Noise Pollution Regulation & Control Rules, 2000, Ministry of Environment & Forests

Indicator 63/70

RSPM (SIZE LESS THAN 10 MICRONS)

Definition
Respirable Suspended Particulate Matter

Rationale for the Indicator
Visibly active maintenance programmes support how comfortable and welcoming public spaces are and encourage ITCs to spend time in public space and explore, especially women and girls. Considerations for maintenance include cleaning, upkeep of street furniture and playspaces, waste management, inclusivity policies and natural surveillance.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Existing Data	Once annually	Neighbourhood

Reliability of Measurements			
Based on published ULB budget report	Based on un published ULB budget report	Desk based estimation For example - based on earlier data and last year ULB budget	Desk based estimation For example - based on earlier data

Benchmark Value*		
Thriving	**Striving**	**Surviving**
0-40	40 - 80	More than 80

*SLBs for Urban Transport- MoUD, Government of India

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SOCIAL INCLUSION

Objectives Achieved	Neighbourhood level indicators
	64. % of encroached/ informal area of total neighbourhood area (Supporting)
	65. Community based organisations deliberately inviting women to planning meetings and delivering recommendations to ULB (Core) 66. Number of initiatives where NGOs working for women and children-oriented development were consulted or partnered with (Supporting)

Indicator 64/70

PERCENTAGE OF ENCROACHED / INFORMAL AREA OF TOTAL NEIGHBOURHOOD AREA

Definition
Encroached area as percentage of total neighbourhood area.

Rationale for the Indicator
Encroachment/Informal areas in urban spaces highlights the level of underutlisation of limited urban spaces. Organised and smart intervention in these areas will lead to more spaces available for park, recreation, community interaction points

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Sample Survey	Once annually	Neighbourhood

Reliability of Measurements			
Based on Latest published landuse report	Selected landuse survey at specific housing blocks as averages and based on old ULB landuse report	Desk based estimation For example - based on Old landuse report	Desk based estimation For example - based on earlier data

Benchmark Value		
Thriving	**Striving**	**Surviving**
Less than 2% area is under encroachment / informal areas out of total neighbourhood area.	2- 5% area is under encroachment / informal areas out of total neighbourhood area.	More than 5% area is under encroachment / informal areas out of total neighbourhood area.

Indicator 65/70

COMMUNITY BASED ORGNISATIONS DELIBERATELY INVITING WOMEN TO PLANNING MEETINGS AND DELIVERING RECOMMENDATIONS TO ULB

Definition

% of women recommendation/suggestion forms a part of overall recommendation by Community based organisations/ RWA / equivalent bodies to ULB .

Rationale for the Indicator

Infants and toddlers are invariably accompanied by a caregiver, in Indian contexts that caregiver is often female. Providing welcoming, comfortable and safe public realm for women supports them in their care of and interactions with infants and toddlers. To design a public realm that supports the wellbeing of babies and toddlers requires design that specifically addresses the health and safety of women, including through engagement with and response to women's needs.

<table>
<tr><th>Units</th><th colspan="2">Data Requirements</th><th>Frequency of Measurements</th><th>Jurisdiction of Measurements</th></tr>
<tr><td>%</td><td colspan="2">Observation</td><td>Once annually</td><td>Neighbourhood</td></tr>
<tr><th colspan="5">Reliability of Measurements</th></tr>
<tr><td colspan="2">Observational on-site survey of all RWA/equivalent bodies at neighbourhood level</td><td>Observational on-site survey of specific sample of RWA/equivalent bodies at neighbourhood level</td><td>Desk based estimation For example - based on existing information and with systematic on-site verification.</td><td>Desk based estimation For example - based on earlier assignment</td></tr>
<tr><th colspan="5">Benchmark Value</th></tr>
<tr><th colspan="2">Thriving</th><th>Striving</th><th colspan="2">Surviving</th></tr>
<tr><td colspan="2">More than 3 recommendation from RWA/ equivalent bodies to ULB is from women representatives articipated in RWA meetings</td><td>1> recommendation > 3 from RWA/ equivalent bodies to ULB is from women representatives articipated in RWA meetings</td><td colspan="2">Atleast 1 recommendation from RWA/ equivalent bodies to ULB is from women representatives articipated in RWA meetings</td></tr>
</table>

Indicator 66/70

NUMBER OF INITIATIVES WHERE NGOS WORKING FOR WOMEN AND CHILDREN ORIENTED DEVELOPMENT WERE CONSULTED OR PARTNERED WITH

Definition

Total number of initiatives in the city seeking consultation an active participation from NGOs working with and for women and children

Rationale for the Indicator

Partnering with NGOs that specialise in women and children's development leverages their expertise and established networks. Consulting and collaborating with them fosters a sense of ownership among community members, leading to increased participation and sustainability of the initiatives. NGOs may have access to additional resources, funding opportunities, and partnerships that government or private entities might not. Collaboration can help expand the reach and impact of the initiatives.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
No	Survey and observations	Once annually	Neighbourhood

Reliability of Measurements			
Comprehensive survey and mapping at all ward level	Listing all initiatives and NGOs working for women and children-oriented development	Desk based mapping and on ground verification plus spatial analysis to understand accessibility and coverage	GIS mapping and accessibility analysis + people's perception and validation

Benchmark Value		
Thriving	**Striving**	**Surviving**
Benchmarking to be decided by the city agency in consultation with concerned stakeholders and experts based on city context and resources		

GOVERNANCE AND FINANCE

Objectives Achieved	City level indicators
	67. Frequency of maintenance of parks (Core)
	68. % of municipal budget allocated for open spaces or parks (including management / maintenance and programming) (Core) 69. Provision of public art expenditure in budget to enhance the aesthetic of public spaces - (Y/N) (Supporting)
	70. Efficiency in redressal of customer complaints on urban services and public spaces (Supporting)

Indicator 67/70

FREQUENCY OF MAINTENANCE OF PARKS BY SIZE OF PARK

Definition
Periodic Maintenance of parks by ULB

Rationale for the Indicator
Visibly active maintenance programmes support how comfortable and welcoming public spaces are and encourage ITCs to spend time in public space and explore, especially women and girls. Considerations for maintenance include cleaning, upkeep of street furniture and playspaces, waste management, inclusivity policies and natural surveillance.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
	Observation	Once annually	City
Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at specific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verification	Desk based estimation For example - based on earlier survey / information
Benchmark Value			
Thriving	**Striving**	**Surviving**	
Daily maintenance of Park	Weekly maintenance of Park	Monthly maintenance of Park	

Indicator 68/70

PERCENTAGE OF MUNICIPAL BUDGET ALLOCATED FOR OPEN SPACES OR PARKS

Definition
Municipal budget on public spaces or park development including operation and maintenance as% of total municipal budget in a year.

Rationale for the Indicator
Allocating sufficient budget to maintenance and management of public space underpins helps to optimise the benefits of public spaces for ITCs and the wider community and supports productive functioning of those spaces. This reduces the risk that public spaces are under used once built and underpins their sustainability. Consideration includes maintenance regimes as well as event and activity programming for the community.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Existing Data	Once annually	City

Reliability of Measurements			
Based on published ULB budget report	Based on un published ULB budget report	Desk based estimation For example - based on earlier data and last year ULB budget	Desk based estimation For example - based on earlier data

Benchmark Value		
Thriving	**Striving**	**Surviving**
There is more than 5% of the allocated municipal budget on open spaces or parks development (including management/maintenance and programming)	There is 5% > Park budget > 1% of the allocated municipal budget on open spaces or parks development	Less than 1% of the allocated municipal budget on open spaces or parks development

Indicator 69/70

PROVISION OF PUBLIC ART EXPENDITURE IN BUDGET TO ENHANCE THE AESTHETIC OF PUBLIC SPACES - (Y/N)

Definition
Existing provision in municipal budget for public art expenditure and percentage increase in expenditure per year.

Rationale for the Indicator
Public art can provide stimulating opportunities for ITCs including play and learning. It also contributes to memorable and vibrant public spaces that are attractive for caregivers and the community to spend time.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
y/n,%	Existing Data	Once annually	City

Reliability of Measurements			
Observational survey of all playable space at neighbourhood.	Observational on-site survey of specific playable area as averages.	Desk based estimation For example - based on existing and earlier information and with systematic on-site verification.	Desk based estimation For example - based on earlier information.

Benchmark Value		
Thriving	Striving	Surviving
Not Applicable		

Indicator 70/70

EFFICIENCY IN REDRESSAL OF CUSTOMER COMPLAINTS ON URBAN SERVICES AND PUBLIC SPACES

Definition
Total number of complaints re-dressed within 24 hours of receipt of com-plaint, as a percentage of the total number of complaints received in the given time period

Rationale for the Indicator
The global problem of waste, encroachment, srime in our cities and neighbourhoods will affect young children for decades to come. Bad management of urban services and spaces can affect the spatial quality of the urban environment, the air quality and can also be a source of deceases,especially in poorer areas.

Units	Data Requirements	Frequency of Measurements	Jurisdiction of Measurements
%	Survey and observations	Once annually	City

Reliability of Measurements			
Comprehensive survey at all housing blocks/cluster	Sample survey at spe-cific housing blocks as averages	Desk based estimation For example - based on earlier survey and with systematic on-site verifi-cation.	Desk based estimation For example - based on earlier survey / informa-tion

Benchmark Value		
Thriving	**Striving**	**Surviving**
100% complaints redressed within 24 hours of receipt of complaint,	50 - 99% complaints redressed within 24 hours of receipt of complaint,	Less than 50% complaints re-dressed within 24 hours of receipt of complaint

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A ANNEXURE - A

CHILD FRIENDLY NEIGHBOURHOOD – COMPONENTS OF ITC NEIGHBOURHOOD

Neighbourhood Layout
Large scale organisational factors, such as the overall character, the density, distance and mix of facilities with the area.

Streets
Mobility-related spaces concerning the practicalities of moving comfortably in the public realm between stops.

Parks and Open Spaces
Key green destinations that matter to ITCs.

Public Services
Local amenities and community facilities.

Utilities
Water, electricity, waste, drainage and other environmental factors.

B ANNEXURE - B

ACTIVITIES REQUIRED AS BASE FOR ACHIEVING SERVICE LEVEL BENCHMARKS

Following activities are required to be done by urban local bodies to assess their work plan to reach service level benchmarks for ITC neighbourhood development.

1. **Mapping of existing neighbourhoods under identified ABD zone in terms of infants, toddlers and caregivers friendly features in the area targeted. This includes mapping of the following:**

    - Existing Neighbourhood layout – Its covers the larger scale organisational factors, its urban design and planning. This involves mapping of overall character of existing urban spaces, the density, distance and mix of facilities within the area which in turn influence the overall physical environment.

    - Neighbourhood Streets: mapping of existing routes on everyday path taken by young children to various destination. It basically includes compiling all data related to mobility-related spaces concerning the practicalities of moving comfortably in the public realm between routes and destination.

    - Parks and Open Spaces: mapping all existing organised green spaces like small tot-lots, Housing Area Park, neighbourhood parks and other common opens spaces at neighbourhood level in terms of facilities that matter to ITCs. For example lighting, play equipment, parks maintenance, safety features, formal and informal play zones, climate protection, protection from strays, safety and comfort of caregivers while assisting infants in parks and so on.
    - Public Services: Mapping of regular basis destination like local amenities and community facilities. Besides open spaces, children and their care takers in a neighbourhood will also have other destinations that they go to on a regular basis. Young children may accompany their caregiver to the shops. They may make regular visits to day care centres and health centres. These public facilities need to also be designed with the needs of the young in mind.

    - Utilities: Mapping of existing condition of utility services like water, electricity, waste, drainage and other environmental factors at neighbourhood level which directly and indirectly impacting the ITC friendly neighbourhood development.

2. **Preparation of GIS maps for all existing features related to ITCs at neighbourhood level in the identified ABD zone**

3. **ITCs friendly infrastructure density maps at neighbourhood level showing areas with high medium and low existence**

4. **Assessment of existing parks and playground at neighbourhood level as follows:**

    - Parks and playgrounds with inadequate spaces and play equipment.

    - Parks and playgrounds with adequate spaces with inferior quality in terms of

lighting, play equipment maintenance, parks maintenance, lesser safety features.

- Parks and playgrounds with dedicated ITCs friendly public space elements like formal and informal play zones, climate protection, protection from strays, safety and caregiver's space in assisting infants in parks etc.

5. **Assessment of existing streets and destinations at neighbourhood level as follows:**

    - Existing neighbourhood streets and regular basis destination with inadequate infrastructure and public spaces.

    - Neighbourhood streets and destinations with adequate infrastructure and public spaces but inferior quality in terms of lighting, maintenance, lesser safety and security features.
    - Neighbourhood streets and destinations with dedicated ITCs friendly public space elements like formal and informal play zones, climate protection, protection from strays, safety and caregiver's space in assisting infants and toddlers.

6. **Infrastructure Gap Assessment of ITCs friendly infrastructure.**

    - Baseline
    - Future Requirement

C ANNEXURE - C

KEY OUTPUTS

By doing above activities and maintaining and updating this data shall enable cities to achieve following key outputs:

1. Baseline Assessment and Forecast

- Benchmarking existing status of neighbourhood's from the lens of ITCs and future requirement
- Identification of key ITCs friendly planning and design requirements
- Identification of gaps and thus required interventions
- Assessment of ITCN friendly elements so as to integrate the component in ABD development under Smart Cities Mission

2. Infants, Toddlers and Caregivers Neighbourhood

- Plan for the ITC friendly Infrastructure augmentation and/or retrofitting ITC friendly features in the existing infrastructure.
- Formulation of ITCN development model under ABD for Inclusive, accessible, safe, green and playful growth.

3. Development of ITC Dashboard with dynamic GIS Interface.

- ITC Dashboard - The ITC dashboard moves measurements into management by providing a visual and comprehensive comparison of performance between neighbourhood, wards, zone, cities and time series data for evidenced based planning. The dashboard includes implementation progress, project types, delivery timescales for different priorities and an overview of objectives met and benchmark scores. The ITC Dashboard supports the review process of the 100 Smart Cities Mission centrally by aiding priority management and informing delivery decisions.

D ANNEXURE - D

MINIMUM DATA SET REQUIRED

Following minimum data set is required to be collected/generated by cities to perform activities as mapped in ITC Neighbourhood Indicators and Service Level Benchmarks (page <?>)

Demand Assessment	• Number of neighbourhood in ABD Zone • Total population by neighbourhood • Population in the age group: 0-5 years • Total number of pregnant women by neighbourhood • Number of breastfeeding mothers as a percentage of total population by neighbourhood • Incidence of children (0-5) respiratory disease
Existing Infrastructure - Park and Open spaces	• Number of tot lots • Number of housing area park by neighbourhood • Number of neighbourhood park by neighbourhood • Percentage of open space by neighbourhood • Per capita organised green space by neighbourhood • Percentage of encroached/ informal area by neighbourhood • Number of parks dedicated young child friendly (0-5) play spaces by neighbourhood • Number of parks that have quality seating by neighbourhood • Number of parks with adequate lighting by neighbourhood • Number of parks with free basic facilities like public drinking water, toilets and other facilities for families by neighbourhood • Frequency of maintenance of parks by neighbourhood • Number of private kindergarten with attached outdoor space by neighbourhood • Number of government schools that allow usage of school campuses during non-school hours by neighbourhood • Number of parks with rainwater harvesting systems by neighbourhood • Number of parks with natural materials in play equipment by play space by neighbourhood • Number of parks with of solar lighting facilities

Existing Infrastructure - Streets	• Total length of street network by neighbourhood • Length of clear and unobstructed pedestrian footpath • Number of kerb cuts per road km • Number of streets with adequate lighting by neighbourhood • Average street light spacing by neighbourhood • Total length of NMT network by neighbourhood • Total length of the vehicle parking on cycle track • Percentage of daily trips by non-motorised means • Number of signals which are synchronised by neighbourhood • Total number of signalised intersections by neighbourhood • Number of one way streets by neighbourhood • Length of street closed to 4 wheel traffic by neighbourhood • Length of street closed to 4 wheel and 2 W traffic by neighbourhood • Length of streets with decibel levels above standard 55 dB by neighbourhood • Number of fatalities recorded of persons who were pedestrians or on non-motorised transport vehicles in road accidents by neighbourhood limits in given year • Total number of fatalities recorded in road accidents by neighbourhood in the given calendar year
Existing Infrastructure - Urban Services	• Number of private kindergarten by neighbourhood • Number of affordable health clinic inside Anganwadi centres by neighbourhood • Number of doctors employed by neighbourhood • Number of dispensary in the neighbourhood y/n • Number of buildings within 300m distance of a green space above 125sqm • Number of buildings within 300m distance of a public facilities like day care centres, pre-primary and primary schools, primary health facilities, local markets • Number of crèches within accessible 500m distance from housing cluster

Existing Infrastructure - Urban Utilities	• Number of SWM collection facility by neighbourhood • Number of household covered by door-to-door collection of SWM services by neighbourhood • Number of households with rainwater harvesting systems by neighbourhood • Number of households with renewable source of energy by neighbourhood • Number of public buildings and plots with renewable source of energy by neighbourhood • Number of water supply related complaints that are satisfactorily redressed within 24 hours or the next working day. • Number of water samples that meet the specified potable water standards in that month
Other	• Level of RSPM (size less than 10 microns) by neighbourhood • Length of street with observable standing water, overflowing drains, sewage by neighbourhood • Number and length of green corridors on major routes by neighbourhood • Number of no-honking zones by neighbourhood • Percentage of municipal budget allocation for open spaces or parks (including management/maintenance and programming) by neighbourhood

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