# TOOLKIT FOR CREATING DATA BASELINE FOR YOUNG CHILDREN IN CITIES

## INFANT, TODDLER AND CAREGIVER-FRIENDLY NEIGHBOURHOODS CAPACITY BUILDING PROGRAMME

## National Institute of Urban Affairs

Core 4B, India Habitat Centre, Lodhi Road, New Delhi- 110003

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# Abstract

A data baseline in tandem with the ITC objectives, collated through participation of the ITC, is required to understand and plan inclusive neighbourhoods for its young children[1]. City planners lack valid scientific tools to assess living conditions in urban areas and the local inhabitants' perception of their environment. A baseline database toolkit is needed to support cities' transformation into ITC friendly cities and to evaluate the implementation of inclusive neighbourhoods.[2] This toolkit, developed under the ITCN Capacity Building Programme, is the first step in addressing the data gaps and can be used by various stakeholders, including the ULBs, NGOs, CSOs, CBOs, RWAs, amongst others, for the baseline assessment, and to plan and design ITC friendly neighbourhoods.

Baseline Toolkit delivers certain parameters, based on them indicators have been selected for rapid and in-depth assessment, for service providers and ULB officials. Exhaustive list of indicator and the sources for collecting intended data is covered.

The baseline toolkit encourages local authority to understand how the built environment and planning prompts decisions and spaces for young children and caregivers. It aims to comprehensively collect data segregated into 4 core theme verticals that are designed to achieve 5 objectives of ITCN – Play, Safe, Green, Accessible and Inclusive; using rapid and in-depth assessment. Toolkit also highlights the importance of Data based decision making transforming city spaces through advanced planning and governance.

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1 (ITCN Design Guidelines, 2019, p. 8)

2 (Evaluating Urban Quality: Indicators and Assessment Tools for Smart Sustainable Cities, 2018, p. 3)

National Institute of Urban Affairs (NIUA), an apex institute of Ministry of Housing and Urban Affairs (MoHUA) is tasked to bridge the gap between research and practice on issues related to urbanization, suggest ways and mechanisms to address urban challenges and strive to develop sustainable, inclusive, and productive urban ecosystems in the country. The institution has been actively working on bringing forth key areas of concern for urban India to build the urban discourse at various urban scales by utilizing its competencies in research, knowledge management, policy advocacy, and capacity building. NIUA imparts these responsibilities through five major themes: Urbanization & Economic Growth, Urban Governance & Finance, Urban Infrastructure & Built Environment, Environment, Climate Change & Resilience, and Social Development.
https://www.niua.org/



Founded in 1949, the Bernard van Leer Foundation (BvLF) 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 Bernard 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. BvLF has supported programs in India since 1992. Urban95 seeks to improve two critical factors in early childhood development – the quality and frequency of interactions between young children and their caregivers, and the well-being of these caregivers – through the provision of early childhood services, public space, transport, planning, land use and data management in cities.
https://bernardvanleer.org/

# Foreword

Hitesh Vaidya

Director
NIUA

'Inclusivity' has emerged as one of the most prevailing mission of Indian cities. SDG 11 focuses on creating cities and human settlements inclusive, safe, resilient and sustainable. Inclusive Cities Centre (ICC) at NIUA aims at facilitating Indian cities to be more inclusive through its diverse programme portfolio.

ITCN Capacity Building Programme, anchored by ICC, aims at addressing the development needs of the cities' youngest citizens, below the age of six years, and their caregivers through planning and development interventions at neighbourhood level on a city-wide scale. Through its focus on developing training modules and curated knowledge products for capacity building of practitioners and young professionals, the programme helps the city to move forward with its agenda of inclusion. The Programme promotes spatial and urban design interventions in cities to cater to the development needs of young children and their caregivers - the often neglected population segment in urban planning.

Data driven planning has proven to be highly effective and efficient tool for inclusivity. The 'Toolkit for Creating Data Baseline for Young Children' is the first among the series of three toolkits developed by the ITCN team to support and guide cities in creating ITC-friendly neighbourhoods. The toolkit focuses on rapid and in-depth assessment of cities on critical parameters, using thematic indicators relevant for spatial planning. I hope the toolkit will guide the cities in data-driven decision making for creating young child-friendly neighbourhoods in our country.

My thanks to partner training agencies and cities under the programme for conducting on –field testing of the toolkit which provided insights on the relevance of indicators used in the toolkit, and published and unpublished data available with several government departments. I would also like to acknowledge the support received from BvLF in developing the toolkit.

My sincere compliments to Ajay Suri for providing overall support and guidance to the NIUA-ITCN team for developing this knowledge product. Congratulations to the ITCN team led by Krishna Kant Pandey for splendid efforts and envisioning this informative and compact toolkit.

# Message

Ipshita Sinha

India Representative
Bernard van Leer Foundation

"The interventions to make our cities Infants, Toddlers and Caregivers (ITCN) friendly requires a data driven approach to ensure that they're relevant to the needs of our communities.

The Bernard van Leer Foundation is happy to support the National Institute for Urban Affairs in the development of the toolkit 'Data baseline toolkit' that focuses on both rapid assessments and in depth assessment. We are hopeful that this toolkit will help the city officials and other key people who wish to build ITC centric neighborhood."

# Abbreviations

| | |
|---|---|
| **AMRUT** | Atal Mission for Rejuvenation and Urban Transformation |
| **AQI** | Air Quality Index |
| **ASHA** | Accredited Social Health Activist |
| **AWC** | Anganwadi Centre |
| **AWW** | Anganwadi Worker |
| **BIS** | Bureau of Indian Standards |
| **BvLF** | Bernard van Leer Foundation |
| **CARA** | Central Adoption Resource Authority |
| **CBO** | Community Based Organisation |
| **CCI** | Child Care Institutions |
| **CFSC** | Child Friendly Smart Cities |
| **CPCB** | Central Pollution Control Board |
| **CSO** | Civil Society Organisation |
| **CWC** | Child Welfare Committee |
| **DTCP** | Directorate of Town and Country Planning |
| **ECD** | Early Childhood Development |
| **ECCE** | Early Childhood Care & Education |
| **I-CHILD** | Indicators for Child friendly Local Development |
| **ICDS** | Integrated Child Development Services |
| **ICPS** | Integrated Child Protection Scheme |
| **IMR** | Infant Mortality Rate |
| **ITCN** | Infant, Toddler and Caregiver-Friendly Neighbourhood |
| **LOS** | Level of Service |
| **MoHA** | Ministry of Home Affairs |
| **MoHUA** | Ministry of Housing and Urban Affairs |
| **MoSPI** | Ministry of Statistics and Programme Implementation |
| **MoWCD** | Ministry of Women and Child Development |
| **NBC** | National Building Code |
| **NCRB** | National Crime Records Bureau |
| **NGO** | Non-Governmental Organization |
| **NIUA** | National Institute of Urban Affairs |
| **NMT** | Non-Motorised Transportation |

| | |
|---|---|
| **NSSO** | National Sample Survey Organisation |
| **PwD** | Person with Disability |
| **RSPM** | Respirable Suspended Particulate Matter |
| **RTE** | Right to Education |
| **RWA** | Resident Welfare Association |
| **SDGs** | Sustainable Development Goals |
| **SLB** | Service Level Benchmarks |
| **SWM** | Solid Waste Management |
| **ULB** | Urban Local Body |
| **UDA** | Urban Development Authority |
| **UNICEF** | United Nations Children's Fund |
| **WHO** | World Health Organisation |

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*Photograph by: Priyanka Krishnan*

# 1. Introduction

## 1.1  Background

According to Census 2011[3], 31% (approximately 377 million) of population resides in urban India, of which young children under the age of 6 years form up to approximately 11% (43 million) of the demographics. The ITC demographic goes up further up to 34% (129 million), considering parents of the children as primary caregivers which makes them one of the most important stakeholders of the urban realm. However, in planning and creation of urban spaces, especially in case of infrastructure, the needs of this demographic are often overlooked, or not taken into account by cities. This is making cities more exclusionary.

To make our cities accessible to every citizen, 'Inclusion' has been amongst the focus areas of NIUA's work over the past decade. The CFSC programme, implemented by NIUA with support of BvLF, has created a substantial inventory of knowledge and learnings on ground for creating and facilitating child-friendly cities and spaces. One of the most positive outcomes of this work has been widespread acknowledgement that children are stakeholders in the use and design of built environment of their neighbourhoods and cities. In fact, this initiative has helped reinforce the advocacy for children's rights by bringing in the role that built environment plays in the overall holistic development of children.

The CFSC programme generated a demand from cities and civil society organisations for orientation and toolkits to guide them in creating child friendly cities and to make the city plans sensitive to the needs of children. The lack of data, and the capacities to engage with its young children and their caregivers are one of the prime challenges in creating urban spaces that are not exclusive to but inclusive of its young children and their caregivers. This setup the stage for consolidation of knowledge, need and gap assessment, and capacity building of city stakeholders for creating young child and caregiver friendly cities. The focus has been sharpened on the most vulnerable group amongst the children i.e., infants and toddlers as well as their caregivers (ITCs), and to help formulate relevant local and city level policies and interventions to further the Urban95 philosophy and initiative in Indian cities.

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3 (Office of the Registrar General & Census Commissioner, India, 2011)

To address the knowledge gap, an <u>ITCN framework</u>[4] has been developed under the partnership of MoHUA and BvLF. The knowledge inventory is intended to provide city agencies and stakeholders like urban local bodies, community-based organisations, professionals, and caregivers themselves with the tools that they would need to create a holistic neighbourhood where families can thrive. It also helps to sensitize city managers to the needs for child development, to enable officials to make decisions on their own and to be able to provide a sound rationale for why they took those decisions.

In this backdrop, NIUA and BvLF partnered to deliver ITCN Capacity Building Programme for officials of urban local bodies and young professionals in India, over a period of two years starting from January 2021. The aim is to address the needs of infants, toddlers and their caregivers at neighbourhood (ITCN) level in cities. The Programme capitalized on the inventory of knowledge developed by the BvLF under its various partnership programmes including the CFSC programme with NIUA. The ITCN capacity building programme is a continuation of the long term partnership between NIUA and BvLF to scale up the efforts and embed the lessons of ITC needs at neighbourhood level within the city level programmes.

# |1.2  Definitions

1.  **Infant, Toddler, Caregiver (ITC):** Infants, Toddlers and Caregivers or 'ITCs' is a grouping of persons in various age groups and gender. The term refers to a grouping of at least two people, the youngest of whom is under six years old.[5]

    a.  **Infant, Toddler and Young Children:** The Census of India defines infant, toddler and young children as those in the age-group 0-6 years.[6] They are further classified as Infants in the age group of 0-1 year, Toddlers 1-3 years and Young Children 3-6 years[7].

    b.  **Caregiver(s):** Caregivers may have any background, any age group, any gender, and in any number and are responsible for managing the vulnerabilities of themselves as well as their wards in the age group 0-6 years. Caregivers include family members or neighbours who take care of the young children during the course of the day.  A caregiver accompanies and assists the infants, toddlers and young children in meeting their day to day and development needs. This role can be taken by a mother, a father, a grandparent, sibling or another relative, or another adult to provide nurturing care through childhood, preparing young children to live in society, form relationships, learn, work and thrive (Bernard van Leer Foundation, 2019).

2.  **Persons with Disabilities (PwD):** "Persons with disabilities" are those with long term physical, mental, intellectual or sensory impairment which, in interaction with barriers, hinders their full and effective participation in society equally with others.[8]

3.  **Service Providers:** The urban local bodies of India are vested with a long list of functions delegated to them by the state governments under their respective municipal legislations. The Twelfth Schedule of Constitution (Article 243 w) provides an illustrative list of eighteen functions for provision of services to citizens by the urban local bodies such as Public Health, Urban Planning, etc. [9] The ULBs are mandated to provide these services under the State Municipal Act. They are aided by state departments, state parastatal agencies and special purpose vehicles in carrying out these functions. The officials of the urban local bodies, ward councilors, ward committee members, district department officials, state departments, parastatal agencies and special purpose vehicles are responsible for the provision of various services mandated are

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*4 (Infant, Toddler, Caregiver-Friendly Neighbourhood (ITCN) Framework and Guidelines, 2019)*
*5 Pg. xivv, Infant, Toddler, Caregiver-Friendly Neighbourhood: Policy Framework (Bernard van Leer Foundation, 2019)*
*6 (Office of the Registrar General & Census Commissioner, India, 2011)*
*7 https://www.cdc.gov/ncbddd/childdevelopment/positiveparenting/toddlers.html*
*8  (The Rights of Persons with Disabilities Act, 2016, p. 6(s))*
*9 12th Schedule, (Ministry of Law & Justice, GoI, 1993)*

termed as Service Providers. Furthermore, within these departments, the Women and Child Development Department, Health Department and Education Department are directly working for provision of health, nutrition and education of young children and their mothers.

4. **Social and Behaviour Change (SBC):** Social Behaviour Change is amongst the behaviour science disciplines which uses deep understanding of individual and societal behaviour to promote changes in knowledge, attitudes, norms, beliefs and adoption of healthy behaviours. It refers to the coordination of messages and activities across a variety of channels to reach multiple levels of society, including the individual, the community, services and policy. SBC is grounded in theory and is evidence-based.

5. **Early Childhood Development (ECD):** Early childhood refers to the formative stage of first six years of life, with well-marked sub-stages (conception to birth; birth to three years; and, three to six years) having age-specific needs. It is the period of most rapid growth and development and it is critical for healthy survival. The NECCE Policy, 2013[10] specifies care, health, nutrition, play and early learning within a protective and enabling environment as the key elements for early childhood development.

6. **Slum:** A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.[11]

   **6.1 Classification based on Tenability**

   a. **Tenable Slums:** Slums which are not located on hazardous locations suitable for human habitation and the land is not earmarked for any major public facilities and therefore it can be regularized in the same location.[12]

   b. **Untenable Slums:** Slums which are on environmentally hazardous sites (like riverbank, pond sites, hilly or marshy terrains, etc.), ecologically sensitive sites (like mangroves, national parks, sanctuaries, etc.), and on land marked for public utilities and services (such as major roads, railway tracks, trunk infrastructure, etc.).

   **6.2 Classification based on Census[13]**

   a. **Notified Slum:**  All notified areas in a town or city notified as 'Slum' by State, UT Administration or Local Government under any Act including a 'Slum Act' may be considered as Notified slums.

   b. **Recognized slum:** All areas recognised as 'Slum' by State, UT Administration or Local Government, Housing and Slum Boards, which may have not been formally notified as slum under any act may be considered as Recognized slums.

   c. **Identified slums:** A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

7. **Squatter Settlements:** Squatter settlements are spontaneous and unorganized settlements where land has been occupied illegally. They are often found on marginal or environmentally hazardous lands, such as close to railway tracks, along rivers and canals etc. They are also found on government land or land whose ownership is unclear.

8. **Illegal Settlements:** Illegal settlements are planned and organized settlements where land has been occupied illegally. These usually occur in cities where the government owns large tracts of vacant land, with low opportunity cost.

9. **Neighbourhood Park:** Neighbourhood Park are planned green spaces developed at the neighbourhood level for a population of 10,000 with an average area between 2000-4000 sqm.[14] Parks can be commonly shared between residential and any Central Business District(CBD) areas.

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10 *(National ECCE Policy, 2013)*

11 *(Housing for All Mission- Scheme Guidelines, 2021, p. 6)*

12 *(Guidelines for Preparation of Slum Free City Plan of Action, p. 31)*

13 *(CENSUS OF INDIA 2011 - CIRCULAR No. 8, 2010, p. 3)*

14 *(Town and Country Planning Organisation, MoUD, GoI, 2014) ; (URDPFI Guidelines, 2014, p. 363)*

10. **Tot lots:** Tot lots are the lowest level in the hierarchy of green areas, planned for a population of 2,500 as play-areas for children with an area of 125 sqm.[15]

11. **Child Care Institution (CCI):** "Child Care institution" means Children Home[16], open shelter[17], observation home[18], special home[19], place of safety[20], Specialised Adoption Agency[21] and a fit facility[22] recognised under the Juvenile Justice (Care and Protection of Children) Act, 2015 for providing care and protection to children, who are in need of such services.

12. **Crèche**: A crèche is a facility where parents can 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[23].

13. **Urban Local Body:** Municipalities are institutions of self-government constituted under article 243Q of Constitution of India[24]. These are referred to as Urban Local Bodies and categorised into three categories according to the 74th CAA, 1993[25] into

    a. Nagar Panchayat (by whatever name called) for a transitional area, that is to say, an area in transition from a rural area to an urban area;
    b. Municipal Council for a smaller urban area; and
    c. Municipal Corporation for a larger urban area

14. **Non-Motorised Transport (NMT) :** Non-motorised Transportation (also known as active transportation and human powered transportation) includes walking and bicycling, and variants such as small-wheeled transport (cycle rickshaws, skates, skateboards, push scooters and hand carts) and wheelchair travel.[26]

15. **Children Priority Zone (CPZ):** Establishing a children's priority zone starts with finding an anchor institution – perhaps a CCI (Refer Definition No. 11), playground or health clinic – and defining a perimeter around it. Young child friendly interventions including traffic calming, wayfinding, play-streets programming, pop-up parks, improved crossings and pavements/ sidewalks, enhanced landscaping, social seating and behavioural prompts can be tested, around these anchor institutions. Lessons from the pilot can then be integrated into a masterplan with potential to implement interventions around all CCI (Refer Definition No. 11) in the city.

15 (Urban Greening Guidelines, 2014, 2014, p. 7)

16 Section 2 (19), JJ Act,2015

17 Section 2 (41), JJ Act,2015

18 Section 2 (40), JJ Act,2015

19 Section 2 (56), JJ Act,2015

20 Section 2 (46), JJ Act,2015

21 Section 2 (57), JJ Act,2015

22 Section 2 (27), JJ Act,2015

23 (NATIONAL CRECHE SCHEME FOR THE CHILDREN OF WORKING MOTHERS, 2017, p. 5)

24 Article 243 P, (Constitution of India, p. 100)

In this article, –a transitional area, –a smaller urban area or –a larger urban area means such area as the Governor may, having regard to the population of the area, the density of the population therein, the revenue generated for local administration, the percentage of employment in non-agricultural activities, the economic importance or such other factors as he may deem fit, specify by public notification for the purposes of this Part.

25 Article 243 Q, (Constitution of India, p. 100)

26 https://www.ctc-n.org/technologies/promotion-non-motorised-transport

## 1.3 Need to have ITC Related Data at the Neighbourhood Level

India is home to 165 million infants, toddlers and young children in the age group 0-6 years (14% of the population[27]) of whom 43 million children reside in urban areas (2011). Early childhood development studies suggest that up to 90% of the human brain development happens till the age of five years[28]. Young children below the age of six years need to feel safe, get consistent support from their caregivers, spend quality time outdoors where they can explore, engage and establish connection with nature. This helps them thrive and have an enhanced cognitive, physical and emotional development.[29] The children in the age group 0-3 years require responsive care and interactions from caregivers. At this stage, along with the health and nutrition of a new-born baby, maternal health and nutrition is equally important. In addition to these needs and the continuous presence of a responsive caregiver, access to a safe and secure built environment is necessary to protect the child from any physical dangers, emotional stress, environmental risks (e.g. pollution) along with the availability of quality early childhood support services at the community level such as health clinics, day care or crèche facilities. In addition to these, young children of 3-6 years specifically need access to good quality parks and playground, public spaces and play based pre-school education for supporting their foundational stage of learning. Young children thrive when they are able to freely explore and interact with their surroundings under the supervision of their caregivers.

The usual number of extra trips made by ITC, as linked individuals engaging with the city, can be understood by the following images (Refer Figure 2 & Figure 3) as opposed to an average working individual (Refer Figure 1). The trip chain of an average working individual includes a work trip, followed by a shopping trip and return trip to home. However, infants and toddlers require constant companionship and supervision by their caregivers and young children join many of their caregivers' trips in addition to their daily trips for play, health and education which results in almost doubling of their trip chain. This inevitably increases multi-fold if there are multiple caregivers (parents, relatives, house help, etc.) during the course of day. These trips also have a disproportionate effect on young children because of their heightened sensitivity to physical environment. As a comparison, a toddler takes between 40 to 60 breaths per minute, with lungs that occupy a huge proportion of space within their small bodies, while an adult takes 20 breaths a minute.[30]

**Figure 1: The mobility chain of person-1**
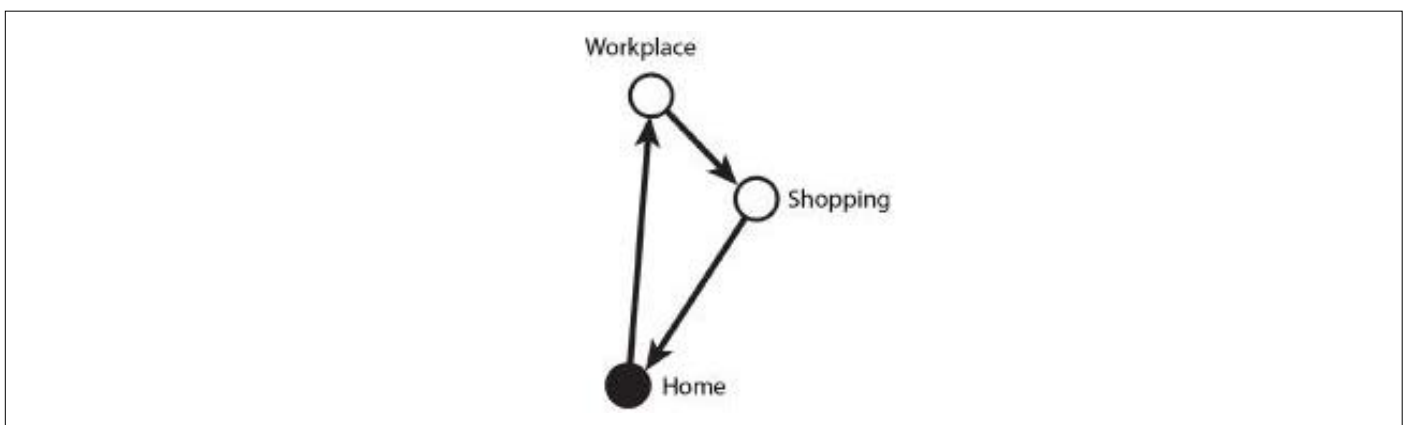


*Source: ITCN Policy Framework, Smart Cities Mission*

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27 Table C-13, (Office of the Registrar General & Census Commissioner, India, 2011)

28 https://theirworld.org/explainers/early-childhood-development#section-2

29 (Infant, Toddler, Caregiver-Friendly Neighbourhood (ITCN) Framework and Guidelines, 2019, p. 3)

30 (Infant, Toddler, Caregiver-Friendly Neighbourhood (ITCN) Framework and Guidelines, 2019, p. xii)

**Figure 2:  The mobility chain of person-2**
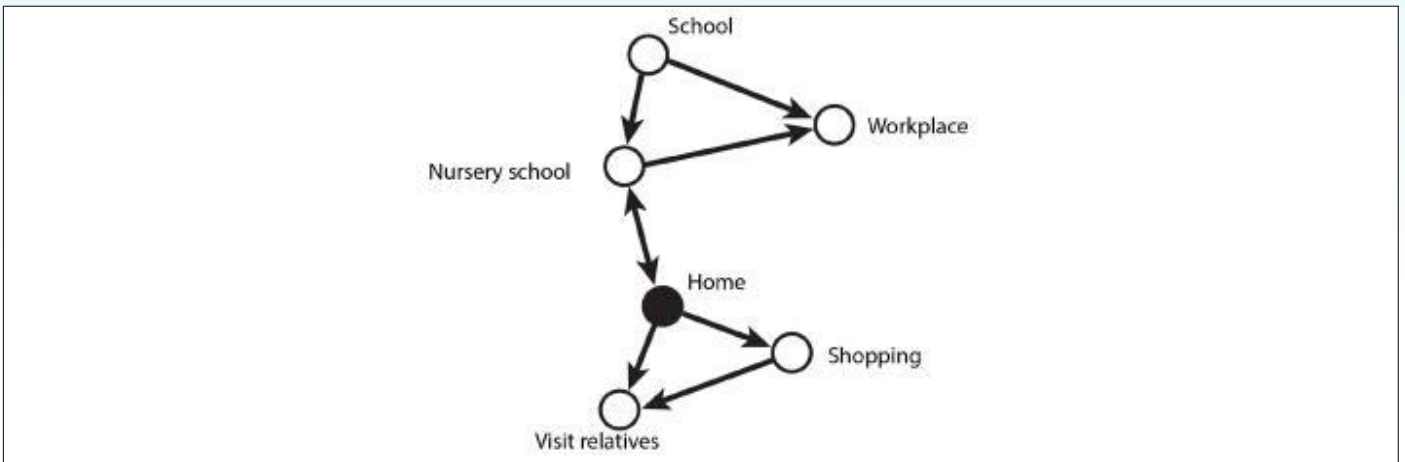


*Source:ITCN Policy Framework, Smart Cities Mission*

**Figure 3: The mobility chain of an ITC Family .**
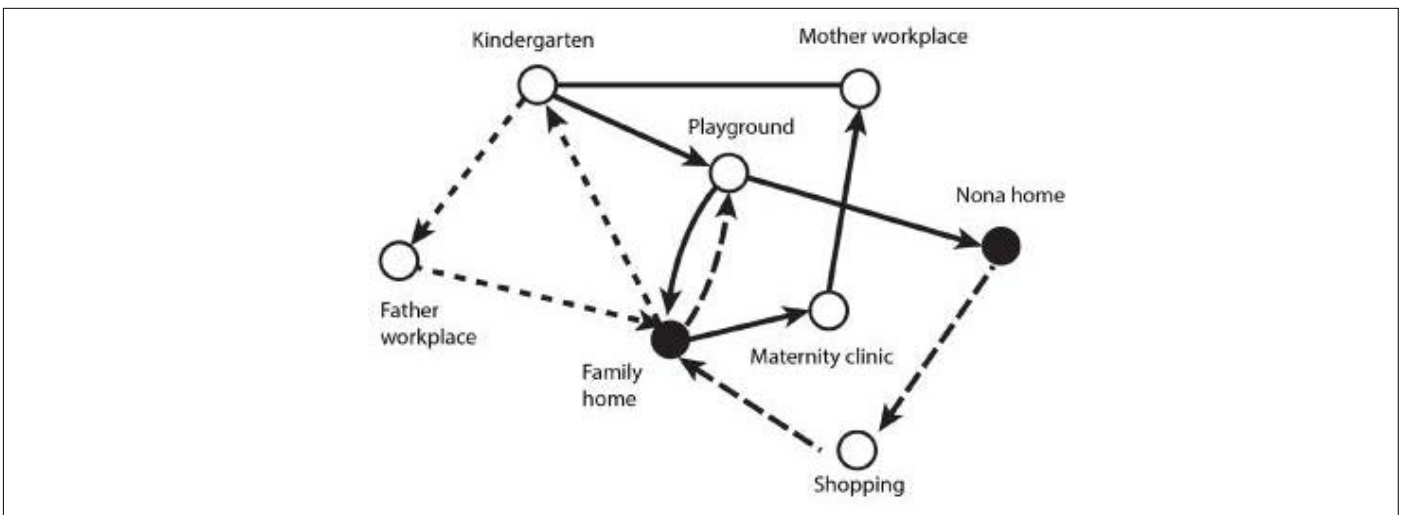


*Source: ITCN Policy Framework, Smart Cities Mission*

**Figure 4: Location of amenities linked to child's physical development**



*Source: ITCN Policy Framework, Smart Cities Mission*

Furthermore, the walking range of the ITC group is in the range of 200m-600m, based on their age group (Refer Figure 4), as compared to 400m – 2km[31] for a male main worker. Most of the ITC daily interactions are observed to be within the range of 600m from home, which in Indian context translates to a neighbourhood unit for ITC. Thus, for the purpose of data 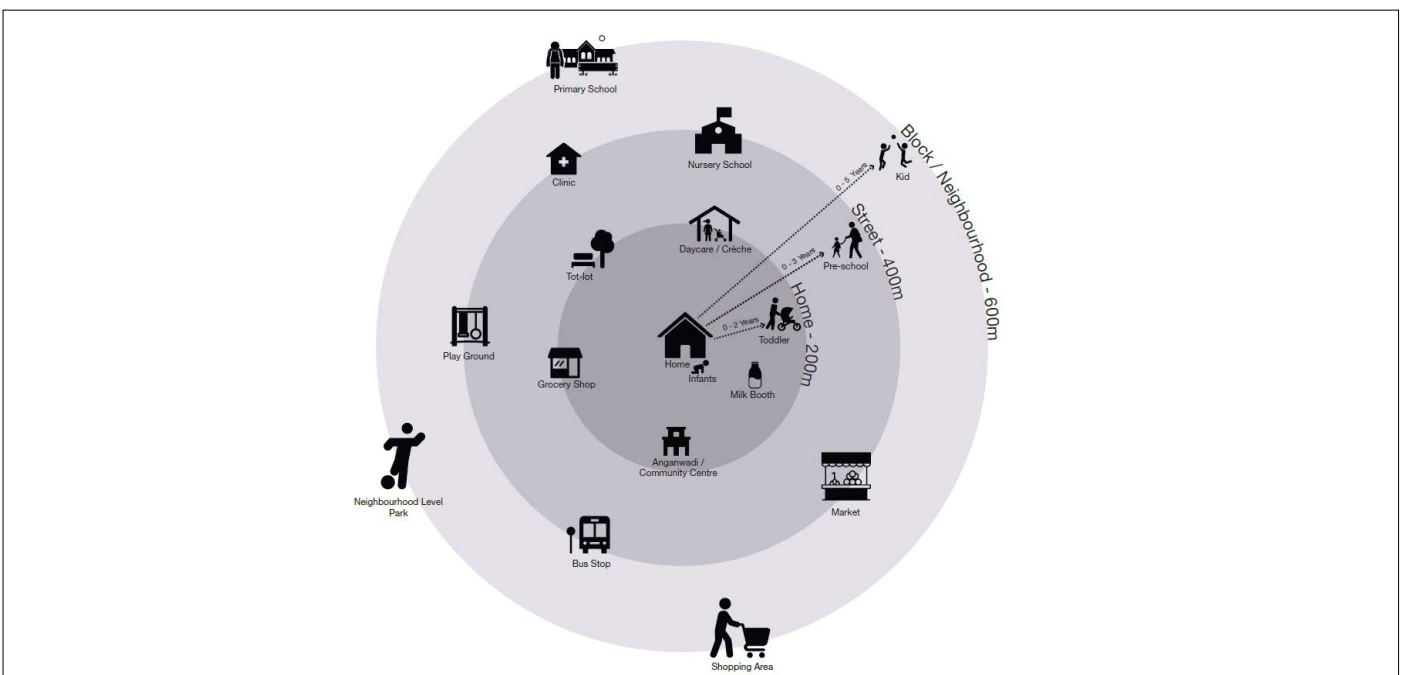collection on the ITC, the neighbourhoods should be considered as the basic planning unit. An ideal ITC neighbourhood, in the Indian context, should have mixed land use and the recommended distance for caregivers to all community facilities and amenities is 5-15 minutes walking distance (300-800m)[32] for easy access to care-taking facilities[33]. An ITC-friendly neighbourhood may be viewed as an intermediate scale urban unit, larger than a single building and its immediate surroundings but smaller than an entire town or city—in other words, a spatial unit that is self-sufficient and characterised by social interactions between residents. These neighbourhoods, though small, are to be viewed as a relatively independent area of dwellings, employers, retail, and civic places, where its residents and employees identify with their immediate environment in terms of social and economic attitudes, lifestyles, and institutions. The neighbourhood planning processes require data on the real needs of city users, and involve all interested social parties.[34]

# 1.4  Need for Toolkit for Young Children

The planning, provision and delivery of infrastructure services required by young children and their caregivers requires data on their varying needs, across geographic areas, settlement typologies and socio-economic groups in the city. An inclusive built environment should have infrastructure provisions based on the varying needs of young children such as park benches at a height of up to 45cm for young children, wider benches for caregivers, pram friendly walkways, sand pits, gender separated washrooms, feeding room facilities, interactive walkways, among others.  However, cities often have little or no data pertaining to the varying needs of ITC. Hence, a data baseline is mandatory to understand and plan inclusive neighbourhoods for its young children and their caregivers. ITC, especially the young children and their caregivers are historically not considered as stakeholders in city planning. They do not get the opportunity to voice their needs and the data relating to them is often hidden in larger, irrelevant database. They are one of the most vulnerable groups and are amongst the socio-economic groups disproportionately susceptible to the negative impacts of urban systems on human health and development such as air pollution, noise pollution, and dangerous infrastructure[35]. ITCs can be considered as an 'Indicator Species' whose needs when addressed includes the needs of all vulnerable groups such as women, PwDs, senior citizens and other marginalised sections of society. The first step in planning inclusive neighbourhoods which are accessible for all is to assess the existing cityscape through the ITC lens. A data baseline in tandem with the ITC objectives, collated through participation of the ITC, is required to understand and plan inclusive neighbourhoods for its young children[36]. City planners lack valid scientific tools to assess living conditions in urban areas and the local inhabitants' perception of their environment. A baseline database toolkit is needed to support cities' transformation into ITC friendly cities and to evaluate the implementation of inclusive neighbourhoods.[37] This toolkit, developed under the ITCN Training and Capacity Building Programme, is the first step in addressing the data gaps and can be used by various stakeholders, including the ULBs, NGOs, CSOs, CBOs, RWAs, amongst others, for the baseline assessment, and to plan and design ITC friendly neighbourhoods.

31 (URDPFI Guidelines, 2014, p. 144)

32 Cities in India have an average density of 45-200 people per hectare based on various city sizes as defined by URDPFI. This corresponds to a population of five to fifteen thousand people living within this zone, which in Indian planning norms, equates to a 'neighbourhood unit'. (URDPFI Guidelines, 2014, pp. 144,283)

33 Refer https://wcd.nic.in/sites/default/files/National%20Early%20Childhood%20Care%20and%20Education-Resolution.pdf to see more

34 (Evaluating Urban Quality: Indicators and Assessment Tools for Smart Sustainable Cities, 2018, p. 5)

35 National Early Childhood Care and Education Policy, 2013, (MoWCD, GoI, 2013)

36 (ITCN Design Guidelines, 2019, p. 8)

37 (Evaluating Urban Quality: Indicators and Assessment Tools for Smart Sustainable Cities, 2018, p. 3)

Photograph by: Mayank Solanki

# 2. Who Would This Toolkit Cater To?

**Figure 5: Stakeholders of Toolkit**



**ULBs, STATE GOVERNMENT DEPARTMENTS (HEALTH, TOWN PLANNING, ENGINEERING, ETC.)**
To carry out data collection, analysis and integrate data with city planning and design

**RWA, HOUSING CLUSTER COMMITTEES, ETC.**
To understand the need and appraise local authorities on ITC friendly infrastructure

**PRIVATE SECTOR (REAL ESTATE, CSR, ETC.)**
To understand the design needs, desired standards for developing ITC friendly projects

**ITC**

**NGOs, CSOs, CBO's**
Advocacy on ITC needs. Identify and implement local level projects for developing ITCN

**URBAN PRACTITIONERS AND POLICY MAKERS**
To identify existing gaps at city level to bring in local level reforms

**STUDENTS OF URBAN PLANNING AND URBAN DESIGN**
To understand the various datasets available for ITCN Planning

Primarily, the toolkit is to help in the diagnostics for advocacy and to mainstream the needs of the ITC group in the neighbourhoods plans in cities. The stakeholders for the toolkit are listed as shown in Figure 5.

The **ULB officials** may use this toolkit to incorporate the needs of the ITC in the city development plans and programmes from ECD and SBC perspective. The various departments which are responsible for planning and implementation of urban plans and projects in the existing municipal structure include:

1. Engineering Department
2. Town Planning Department
3. Public Health Department
4. Poverty Alleviation Department/ Social Welfare Department
5. Land and estate Department / Similar Departments which cater to land use zoning and allocation
6. Education Department
7. Horticulture/Parks & Garden Department
8. Department responsible for Environment planning
9. Urban Development Authority
10. Special projects or equivalent departments

Furthermore, various state government departments also function in tandem with ULB officials to make cities that are inclusive to ECD. They are:

1. Women and Child Development Department
2. Statistics Department
3. Health Department
4. Education Department
5. Urban Development Department
6. Housing & Urban Planning Department

**Planners and academicians** may use the toolkit for urban neighbourhood planning and to understand the various data requirements for the purpose and enable them adopting ECD approach in city planning. The toolkit will help incorporate the norms and standards required to develop ITC-friendly neighbourhoods on city-wide scale. NGOs, CSOs and RWAs can use the toolkit for developing child care facilities. This toolkit is based on ITCN frameworks and guidelines, and can be a good reference point for any organisation/agency/group/ government department to use the ECD lens to promote liveable and sustainable cities for young children and their caregivers.

Photograph by: Yele Venkateswarlu

# 3. How to Use the Toolkit?

This toolkit uses an indicators based assessment approach. Analyses of urban areas typically focus on applying methodologies that evaluate quality objectives at environmental, city, and building levels. Indicators are useful for developing both qualitative and quantitative descriptors of all factors influencing ease of living on cities, including habitat, mobility, urban infrastructure, environment, among others. Proven investigative urban checklists and environmental indicators should be used in a city's transformation process. Indicators-based approach facilitates all stages of the project cycle – city diagnostics, planning, investment prioritization, detailed project report, implementation, and monitoring and evaluation. The approach also helps cities in objectively engaging various stakeholders in the project cycle and in adopting a performance measurement system. This toolkit for developing data baseline for ITCN has adopted a two-tier indicators-based measurement framework and will be useful to interpret and integrate all factors influencing citizens' ease of living, and to interpret interactions between critical resources and the environment.

The toolkit follows a 'whole to part' approach to create a data baseline for ITC in cities. The approach is to, first, help the planners to conduct '**a rapid assessment**' of the city as a whole and identify areas that require immediate assessment. This will enable the planners to take critical evidence-based decisions to create ITC-friendly neighbourhoods, in consultation with municipal councillors, RWAs, CSOs, CBOs and other experts. The key step will be to select a 'light house' area which offers the prospects of investments having maximum impact on early childhood development and also the demonstration effect on other neighbourhoods in the city - similar to Area Based Development under Smart Cities Mission.[39]

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39 (Smart Cities Mission Statement & Guidelines, 2015)

The plans for the neighbourhood may be based on an '**In-Depth' Assessment** of the area, by engaging communities, local authorities and key stakeholders (Refer Figure 6).

**Figure 6: Whole to Part approach for creation of ITC friendly neighbourhoods**
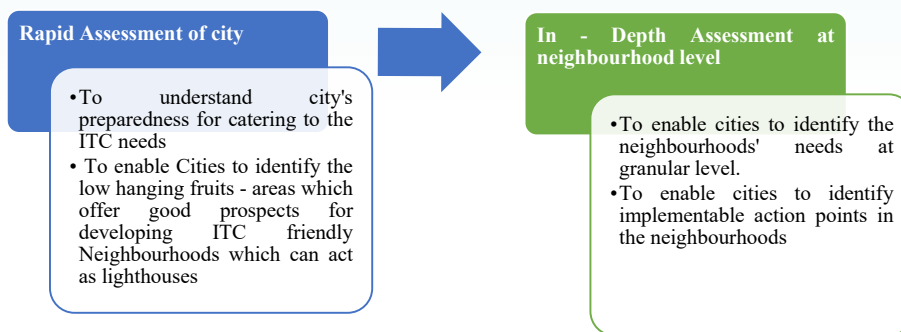


# |3.1  Rapid Assessment

A rapid assessment is a term-based, intensive inquiry on the present conditions by iterative data analysis. It is done to develop a preliminary understanding of a situation and to collect information prior to designing any intervention. It helps determine the magnitude of an issue, the degree of impact on a population and specific population needs and risks. A rapid assessment of city will give an overview of the present conditions of ITC friendliness of the city. Hence, it is imperative that the city and ward level data used is easily available for such an assessment. The assessment includes four core themes:

   a.    Built Environment

   b.    Socio Economic variables

   c.    Safety

   d.    Governance and Planning

Each theme has a set of indicators to provide a holistic view on the various facets of planning for ITC. ITCN is envisaged as a safe, inclusive, playful, green and accessible neighbourhood. Each of these core theme has been identified to achieve these five objectives.

**Table 1: Thematic Areas to achieve ITCN components**

| S. No. | Core Theme | Objective(s) |
|---|---|---|
| 1 | Built Environment | Safety, Inclusivity, Promoting Playfulness, Developing Green Spaces and Accessibility |
| 2 | Socio Economic variables | Inclusivity, Accessibility |
| 3 | Safety | Safety, Inclusivity |
| 4 | Governance and Planning | Inclusivity, Accessibility |

Section 7  of this toolkit provides the methodology for conducting a Rapid Assessment. The city needs to conduct activity mapping to identify activities associated with young children and their caregivers. It will help the city understand where it stands with respect to its responsiveness towards the ITC group. The analysis should be used as a starting point for the city to understand the areas of intervention and the steps to be taken to address the very basic requirements of the ITC group.

# 3.2 In-Depth Assessment

In addition to the rapid assessment, the toolkit provides methods and tools for conducting an in-depth assessment. The in-depth assessment will provide a deeper understanding of the issues relevant for developing ITC-friendly neighbourhoods. It will help in filling the gaps in data and diagnostics at the rapid assessment stage. The purpose of the in-depth assessment is to analyse the finer planning details at the neighbourhood level which impact the conditions and liveability for ITC. The user of the toolkit can follow the recommended steps to identify the needs of the ITC, the gaps in service delivery and the interventions that could be carried out by the city. For the purpose, the toolkit provides primary survey formats to assess the type of public space associated with the ITC activity, the accessibility of ITC to public spaces, services and amenities, factors influencing the behaviour of ITC and their perceptions of safety. The survey formats allow the users of the toolkit to adopt a participatory approach to city/neighbourhood diagnostics to understand the quality of the amenities, public space and built environment at a granular level.

# 4. Expected Outcomes

This toolkit is intended to equip ULBs, UDAs, CSOs, CBOs and NGOs with the requisite baseline data to develop ITC-friendly Neighbourhoods. This toolkit uses an indicator based approach to numerically measure both objective and subjective aspects that affect the quality of life of ITC and the enabling environment to comprehensive early childhood development.

## 4.1  Identification of Baseline Indicators to assess neighbourhood level plans with an ITC lens.

An assessment of existing neighbourhoods is necessary to understand the current situation and responsiveness of city development plans and investment programmes to the ITC needs. Currently, district level data and city level data for children is not disaggregated as per the specific age groups within 0-6 years of age range, despite the variations in vulnerability and dependency of children at different ages. Hence, this toolkit aims to collect the data for young children specifically through primary surveys and suggest to revisit the numbers annually.  The neighbourhood assessment includes built environment for caregivers in spaces allotted for children and ease of mobility for caregivers keeping their day-to-day activities at the core. The ITC group has a direct interaction with its neighbourhood and hence it is necessary to have neighbourhood level data on the built environment in cities. Cities in India are increasingly adopting Local Area Planning, under it's the statutory master plans, which are amenable to incorporating ITC needs at neighbourhood level. For the purpose, the local area plans need to include the critical baseline indicators capturing the needs of ITC at neighbourhood level. This will provide an ITC lens to assess the neighbourhood level plans. This toolkit has identified these baseline indicators that will help aggregate neighbourhood level data for ITC and assess the present conditions of ITC-friendliness of neighbourhoods.

## 4.2  Identify existing gaps for ITC

The use of baseline indicators for neighbourhood assessment will help identify gaps in the built environment, safety provisions, ECD service delivery and mobility for ITC. The rapid assessment will help to identify the gaps in the basic provisions and amenities, such as access to education and health facilities, child day-care centres, road safety, among others at city/ward/neighbourhood level. The in-depth analysis will help to identify the gaps in the quality and effectiveness of built infrastructure, service provisions, safety, mobility, policy and advocacy for the ITC group at neighbourhood level. While secondary data is available on basic indicators on health and education for ITC, the availability and adequacy of such services will be measured in the in-depth analysis. The inhabitants of formal and informal settlements have inequitable access to urban realm and hence there is a huge inequity in access and provision of urban services, such as affordable housing, streets, sanitation, open spaces, healthcare and education etc. This makes the ITC group in informal settlements amongst the most vulnerable group in the city as they have lower access to the very basic services like safety, health, nutrition, early childhood care and education, and sanitation. It is crucial that both the rapid and in-depth assessments do not neglect informal settlements and this toolkit helps cover both formal and informal settlements for identifying the neighbourhood level gaps.

## 4.3  Identification of specific needs of persons with disabilities (ITC), street children and orphans

The ITC population is heterogeneous and includes intersectionality that marginalises certain sections within the ITC group. Persons with disabilities, street children and orphans have specific needs which are different from the children from the privileged socio-economic class in the society.

While approximately 2.2% of the total population in India comprise persons with disabilities (MoSPI, GoI, 2016), there is very little data available on the ITC population with disabilities. Built environment should take into consideration the needs of ITC with disabilities so that cities are more accessible for all. Inequitable access to urban amenities can reduce the number of opportunities for an infant, toddler and their caregiver that can curtail their interaction with the neighbourhood, thus impacting their ECD and access to opportunities during their lifetime.

There is little to no available data on street children in India. Children living on streets are exposed to harsh living conditions and crime, making them susceptible to health related hazards and life-long behaviour challenges. They have no access to health facilities and education making them one of the most vulnerable citizens in urban areas. Safeguarding them from criminal elements, natural disasters and health hazards, and proving them access to shelter, health, nutrition and education are the urgent needs of street children.

Similarly, orphans too, fall in the vulnerable category in cities amongst the ITC group. The reasons behind a child becoming an orphan in the age group of 0-6 are many, and hence interventions are needed at various levels other than the built environment. Orphaned children also require proper care facilities and support of mental health professionals.

As is evident, the immediate and long-term needs of ITC among various vulnerable groups in a city are different from each other. This toolkit helps identify the most vulnerable amongst the ITC and their specific needs, to develop relevant indicators for the baseline database. It is of the utmost importance that the voice of these vulnerable groups are catered and listened to ldirectly in the data collection process. This will bring forth the groups within ITC that have been marginalized, and policies and plans could be modified to cater to their specific needs.

## 4.4  Orientation of the user

The toolkit has been developed to help fill the data gaps on ITC and consequently address the lack of responsiveness to the needs of ITC in planning and policy making. This toolkit introduces the user to the ITC group, highlighting their significance and the importance of safe, healthy and accessible neighbourhoods for ECD. The user is oriented to the relevant indicators on ITC along with data sources, significance of these indicators, methodology for developing the recommended indicators, and data analysis for identification of areas of concern, intervention and gaps for developing ITC-friendly neighbourhoods, and finally the analysis for policy making and planning.

## 4.5  Participatory research approach to understand the needs of ITC

Participatory approach implies that the person in charge of providing a solution directly involves target population who will be affected by the solution. To understand the nature and differences in the neighbourhoods of a city, the toolkit does an in-depth analysis of the services, amenities and built environment available to ITC living in all neighbourhoods. This will help to assess the differences across neighbourhoods with variation in the socio economic conditions of the inhabitants and their access to services and amenities. The in-depth analysis section in this toolkit has provided survey formats for different population segments, although the overall focus is on ITC, and advocates tactical urbanism as an engaging initiative to involve communities in planning process. These surveys are to help the users of the toolkit to gather information at the grassroots level from the people, especially ITC. Participatory research in the form of extensive surveys, questionnaires and focused group discussions have shown to increase the quality of outputs.[40]  Data acquired at such a granular level, i.e. neighbourhoods from the citizens will give a voice to ITC and also help in doing effective analysis of their needs.

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40https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3460206/

# 5. Schematic of Neighbourhood Level Data Management System

For the development of ITC-friendly neighbourhoods in the city, the data should be managed at the neighbourhood level in order to ensure a contextual understanding as well as to contribute insights at the city level. This can be done by taking up various activities in the neighbourhood with relevant city stakeholders. The neighbourhood level data management schematic (as shown in Figure 7) and the following sections describe the series of these activities and how the same can be undertaken by the team.

Figure 7: Schematic for Neighbourhood Level Data Management
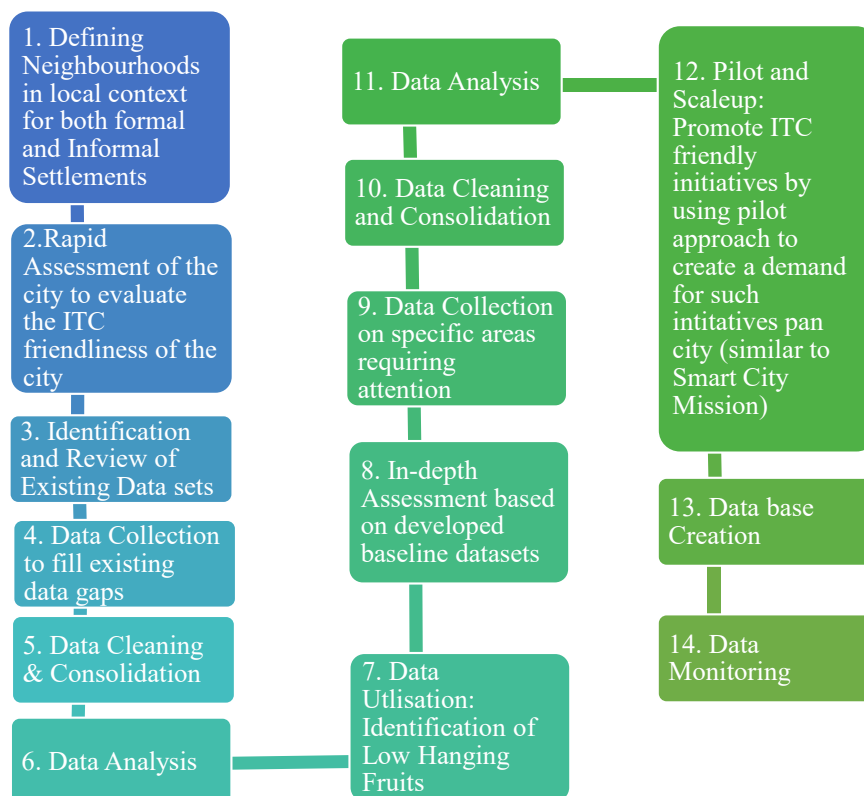


Each of these activities can be carried out by the interdisciplinary core team as mentioned in the Table 2 of Section 6.

*Photograph by: Yele Venkateswarlu*

# 6. Prerequisites for Assessment of City and Its Neighbourhoods

## |6.1 Forming an interdisciplinary core team

The ITC group is heterogeneous with diverse interactions with various aspects of the built environment and, thus, requires intersectional planning. Planning neighbourhoods for ITC cannot be done in silos and requires inter - departmental coordination within the ULBs and inter-agency coordination at the city-level including city agencies, state departments and parastatals to also help in achieving the larger goal of inclusive and sustainable city development. The intersectional planning required for promoting ITCN on city-wide scale requires the constitution of a task force/core group of key decision-makers including the Vice Chairman, Development Authority, Municipal Commissioner and District Collector along with expert facilitators and citizen group representative. The holistic planning and investments for ITCN will require an interdisciplinary core team drawn from various development agencies/departments. City and local area planning typically involves all the departments of ULBs. ITCN planning also can be carried out by the same departments as laid out under the 74th CAA. However, the data collection and analysis on ITC specifically is a niche area and experts are recommended for the task. They will however require a thorough understanding of the ITC needs and issues.

Table 2 presents the composition of the task team within the ULB and along with assigned activities for each team member.

Table 2: Inter Disciplinary Core Team

| # | Activity | Recommended Responsible Department/Designation of Official(s) | Suggested Expert(s) |
|---|----------|---------------------------------------------------------------|---------------------|
| 1 | Ensure coordination between various existing departments | Office of the Municipal Commissioner, Municipal Council: The Municipal Commissioner / Council are vested with the responsibility of taking executive decisions with respect to Municipal Administration as specified in the respective State Municipal Acts. All ULB departments invariably respond to the Office of Commissioner/ Municipal Council which makes this the most suitable department for coordination between various departments. | Project Management Unit consisting of Urban Planners, Engineers who are well versed in the Municipal Administrative Structure who can act as a single source contact point for all coordination. Examples: City Mission Management Units under AMRUT , SPV under Smart Cities Mission. |

| # | Activity | Recommended Responsible Department/Designation of Official(s) | Suggested Expert(s) |
|---|----------|--------------------------------------------------------------|---------------------|
| 2 | Data Collection, Identification and Assimilation of secondary data – published and unpublished | Team of 2-3 Junior Level and Mid-level officials from Engineering Department, Town Planning Department, Public Health Department headed by Municipal Engineer to overlook the process. | • **Demographers** For data mining from published and unpublished secondary sources such as Census, NSSO data, city level data available in ULBs for statistical analysis. <br> • **Sociologist/ behaviour scientist** To collect data and record the social, cultural and behavioural aspects. <br> • **GIS experts** For collecting spatial data and mapping the collected data for analysis. |
| 3 | Data Analysis and Identification of gaps in existing data sets | Same team as above | • **Project Management** Unit consisting of Urban Planners, Engineers who are well versed in the Municipal Administrative Structure who can act as a single source contact point for all coordination. Examples: City Mission Management Units under AMRUT, SPV under SMART Cities Mission. <br> • **Demographers** For statistical analysis and future projections Sociologist/ behaviour scientist To collect data and record the social, cultural and behavioural aspects. <br> • **GIS experts** For Analysis of Spatial Data pertaining to distribution of Services. <br> • **Data Analysts** for analysing the collected data and finding outcomes |
| 4 | Addressing Data Gaps by Data Collection, data Assimilation and Data Analysis – Primary Surveys | | • **Students, NGOs and CBOs** for data collection especially in case of primary data collection, thus directly involving them in city planning. Example: Municipal Committees such as NMT committee by Pune Municipal Corporation consisting of NGOs and Citizens among others. <br> • **Demographers** For statistical analysis and future projections Sociologist/ behaviour scientist To collect data and record the social, cultural and behavioural aspects. <br> • **GIS experts** For Analysis of Spatial Data pertaining to distribution of Services. <br> • **Early Childhood Expert** for bringing the concerns of young children into the data system <br> • **CSOs** To voice their needs for ensuring qualitative inputs on perceptions of safety, and ITC readiness of City. <br> • **Data Analysts** for analysing the collected data and finding outcomes |
| 4 | Creation of evidence based interventions to encourage informed decision making | Team of 2-3 Senior level officials from Engineering Department, Town Planning Department, Public Health Department headed by Municipal Commissioner to push forward initiatives for ITC. | Project Management Unit consisting of Urban Planners, Engineers who are well versed in the Municipal Administrative Structure who can prepare analysis based plans, proposals and projects for improving urban services. Examples: City Mission Management Units under AMRUT, SPV under SMART Cities Mission. |

| # | Activity | Recommended Responsible Department/Designation of Official(s) | Suggested Expert(s) |
|---|----------|----------------------------------------------------------------|---------------------|
| 5 | Planning and Implementation of ITC friendly initiatives based on data sets | Office of the Municipal Commissioner and Municipal Council consisting of Elected representatives | NGOs, CSOs and CBOs can be active participants to spread awareness regarding the initiatives. |
| 6 | Monitoring of ITC Data sets | Department Heads of municipal Departments to ensure timely updation of data sets headed by Municipal Commissioner | Project Management Unit constituting of Urban Planners, Engineers who are well versed in the Municipal Administrative Structure who can act as a single source contact point for all coordination. Examples: City Mission Management Units under AMRUT , SPV under SMART Cities Mission. |

# 6.2  Stages in Data Management

The Data Management System may be developed in 3 stages - the pilot stage, intermediate stage and the advanced stage. The pilot stage will entail conceptualization of base indicators and secondary data mining to develop them. At the intermediate stage, the base indicators will help the city to develop a better understanding of infrastructure associated with live, play, learn and mobility requirements of the ITC, based on their everyday life patterns. This will only be done once the city has developed an intermediary understanding of the database of young children including demographic data and household level data. The third stage is the Advanced Stage whereby the city will observe, document and analyse the granular level details of the quality of urban services for young children. At this stage, an in-depth database will be generated for the ITC, which will be used by the city to assess the quality and adequacy of the services provided to meet the specific ITC needs.

# 6.3  Identifying the scale of the city, governance structure and planning responsibilities

The size of the city determines the governance structure and planning responsibilities of various authorities. This is evident in the varying number of officials specified to carry out urban planning and project implementation as per URDPFI Guidelines, 2014[41]. Thus, the scale of city plays a key role in formulating the work plan, which will depend on:

1.   Population
2.   Distribution of Services across cities
3.   Geographical extent and model of spatial division (sub city/ zone/ area in case of mission cities/ ward)
4.   Level of decentralization of functions to understand the varying structures of local government and different departments associated with providing services to children and families.

Cities, based on their size, need to formulate appropriate mechanisms to ensure inclusion of ITCs into the urban planning practices and service provision such as educational and health facilities for young children. While URDPFI guidelines, 2014 provide norms for service provision for cities of varying size, the cities need to contextualise the norms and formulate tailor made development plans and development control regulations to ensure that the development interventions are suited to the needs of ITCs.

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41 Pg. 104-105, (Ministry of Urban Development, 2015)

**7.**



*Photograph by: Vedangi Deshpande*

# 7. Assessment of City and Its Neighbourhoods – Data Collection

## | 7.1  Thematic Areas

The city-wide ITC-focused assessment at the neighbourhood level will consider all types of settlements, including informal and low-income settlements. The assessment will cover four broad thematic areas to help analyse the existing city infrastructure including both physical and social. The assessment is to aid the cities to promote Early Childhood Development and bring in Social Behaviour Change. The indicators for the four thematic-based assessment are presented in the sub-sections below.

### a. Socio-Economic Indicators
Socio-economic indicators like the demographic composition of the city, slum concentration rate, population density, sex ratio, literacy rate and migration rate have a bearing on the ITC-inclusive planning. These indicators highlight the extent of marginalisation and vulnerability of ITC, which are important consideration of lending them a voice in decision making. These indicators will further help in analysing the intersectionality, especially of ITC with disability and ITC living in informal settlements.

### b. Built Environment Indicators
Children explore cities from  a height different than an average adult, typically at 95cm (Urban 95) and through their sense of touch, sight and smell. Young children also move at a different pace and have different necessities in their journey, factors which need to be considered in planning mobility and related facilities for the city. The housing conditions and access to basic services impact the development of child varyingly[42]. This toolkit emphasizes the quality of built environment and infrastructure, and the general lack (inadequate provision of street space, green spaces, health and early childhood education facilities, etc.) of the same for ITC. The built environment indicators are focused on ITC access to housing, mobility services, open spaces, primary health centres and early childhood education centres or preschools. The toolkit has made use of  URDPFI and NBC guidelines for identifying various indicators under this theme. These include access of ITC to basic services like water supply, sanitation and SWM, health infrastructure in the city, schools, parks and open spaces in the city and the early childhood provisions.

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42 Refer to UNICEF guidelines at https://nurturing-care.org/

## c. Safety

Safety of children is paramount and impacts their development. Young Children need consistent support from their caregivers. The development of infants and toddlers is severely affected if the caregivers feel anxious or unsafe in a place and is a huge deterrent in letting children explore the city at their own pace. In the Indian context, young children are often accompanied by female caregivers and this makes ITC the most vulnerable group as the cities are perceived to be unsafe for women and children[43] (NCRB, MoHA, 2019). Assessing the safety of urban spaces and to improve these for enabling equal access to services is beneficial not just for the ITC but the society in general. Child safety can be further divided into areas like personal safety of the child, traffic safety and mobility (URDPFI Guidelines, 2014 and ICHILD). Safety and Mobility guidelines are used to conceptualize baseline indicators for this thematic area. Indicators under this theme also cover issues relating to crimes against children, vulnerable children, and safety mechanisms and policies in the city.

## d. Governance and Planning

One of the major reasons for the exclusion of ITC considerations in planning is their non-participation or access to governance and decision making systems. Since infants and toddlers are not capable of decision making, their guardians, that is, their caregivers can be considered to represent them in the governance and planning system. There is the need to adopt a ITC lens to urban planning. ITC provisions in the built environment should make up a significant portion of formalised plans in proportion to the ITC population. Assessment of this thematic area will have indicators on the participation of caregivers in the city governance and participation process, programmes and policies relevant to children being implemented in the city, city vision and its incorporation of ITC, incorporation of ITC in the city master plan, and budgetary allocations towards early childhood development.

Primarily two types of data sources/ collection methods (Refer Table 3) can be used for the assessments:

1.   **Primary Data Sources**

Primary Data Collection using instruments such as household survey, PRA tools, transect survey, Key Informant Interview (involving young children and their caregivers in direct and indirect participation in participatory planning across cities) and Focus Group Discussion.

2.   **Secondary Data Sources**

Secondary Data Collection covers both published and unpublished data mining. Published data sources include government and non-government publications, census, NSSO, state and district statistics handbook, CSO publications, books, journal articles, websites and reports, etc. while unpublished data is sourced from internal records of various organisations/departments including the ULB.

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*43 According to NCRB, 2019*

*F) Crime against Women*

   *i. A total of 45,485 cases of crime against women were registered during 2019, showing an increase of 7.8% over 2018 (42,180 cases)*

   *ii. Majority of cases under crime against women were registered under 'Cruelty by Husband or his Relatives' (30.9%) followed by 'Assault on Women with Intent to Outrage her Modesty' (20.2%), 'Kidnaping & Abduction of Women' (19.3%) and 'Rape' (7.3%).*

*G) Crime against Children*

   *i. A total of 21,425 cases of crime against children were registered during 2019, showing an increase in registration by 4.5% over 2018 (20,511 cases).*

   *ii. In percentage terms, crime heads reporting majority of cases under 'Crime Against Children' were kidnapping & abduction (57.6%) followed by Protection of Children from Sexual Offences Act, 2012 (29.2%).*

Table 3: Primary vs Secondary Data Collection

| Area of Comparison | Primary | Secondary |
|---|---|---|
| Modes of Collection | Household survey, PRA tools, Key Informant Interview and Focus Group Discussion | Government and non-government publications, Census of India, NSSO, state and district statistics handbook, CSO publications, books, journal articles, websites and reports, etc., and unpublished internal records |
| Time Consumption | Time Intensive (Varying based on type of Data sets to be collected) | Short depends on the tools, scope and community engagement (Can be as short as a day based on availability) but requires inter-organization coordination |
| Cost | High (As personnel are required to manage, collect, collate and clean the data) | Low (Already standardised data sets) |
| Reliability | High (On ground data & up to date) but depends on the design of survey instruments, expertise in conducting the survey, strata definition for sampling to ensure geographic spread and representation of various socio-economic groups and types of settlements and random unbiased sample selection methodology. | Relatively Low (Dated and Subject to errors of data collection which cannot be foreseen) |
| Suitability | All projects and planning exercises | Typically for baselining and projections |

The data collected from these sources can be broadly categorised into quantitative data and qualitative data. The data collection method to be employed depends on the intent of the assessment. The difference between these data sets and the data collection method to be employed are as shown in  Table 4

Table 4: Types of Data

| Parameter | Quantitative Data | Qualitative Data |
|---|---|---|
| Suitability | For number based, measurable data analysis that involves questions such as how much and how many. | For interpretation-based and descriptive data analysis that involves questions such as why and how. |
| Source | Primary Sources (eg. Street Inventory Survey, Household Survey, etc.)<br><br>Secondary Sources (NSSO, Reports, Census Tables, etc.) | Primary Sources (eg. Focus Group Discussions, Questionnaires, Opinion Polls, Interviews, etc.) |
| Focus Area | Projections, Forecasting,  Measuring and generalizing results. | Open-Ended Investigations, Identifying Trends, Behaviour assessments, |
| Nature of Data | fixed and universal for the target group | subjective and unique to the target group |

# 7.2  Methods of collecting primary data

The following methods are often used for primary data collection. However, while conducting a detailed assessment, they may be simultaneously used in order to maximize the benefits of triangulation while saving valuable resources.

## 1. Focus Group Discussions
Focus group discussions are conducted between varied stakeholders to discuss issues, experiences and insights in an informal manner and the participants are free to comment, criticize, or elaborate on each other's views.

The discussion group comprises around 10-20 participants in a homogeneous group, a moderator and more than one scribe for note-taking. A session usually lasts 1-2 hours with a moderator introducing the subject, starting an open discussion and ensuring balanced participation by addressing everyone or taking a group poll. It is ensured by the moderator that no one idea prevails the discussion by specifically asking for more ideas and explanations.

## 2. Key Informant Interviews

Key informant interviews are conducted with community experts who are aware of local beliefs and attitudes, as well as, thematic experts who have specialized knowledge and experience on the subject matter.

The interviews are usually conducted by an interviewer, accompanied by a scribe, and can be recorded with permission of the interviewee. Once the interview has been completed, the interview team shares the detailed summary of interview with research team. It is essential to remember that the key informants do not necessarily have to be well educated, professional, or community leaders. The ideal key informants may hail from the most vulnerable groups who have critical first-hand information and experience on the issue.

## 3. Structured Direct Observations

Direct Observations are structured to gather data based on well-designed observation forms/questionnaire, which are designed to take into consideration the nature of the subject/object to be observed. In most instances, direct observations are often triangulated with focus group discussion and key informant interview data to compare observed behaviour with stated behaviour.

It is better to have this conducted by a team of experts as a team approach ensures lesser individual biases and more comprehensive data collection. The question forms should be comprised of questions which are mostly objective, easy to follow and simple to mark.

Examples of non-directive probes "Tell me more about…" "Take me through exactly what happens when you…" "Can you give me an example of…?" "Did I understand you correctly when you said…?" "Can you explain a bit more what you mean by…?" "Why do you think that is the case?" "Do you think everyone thinks that?"

## 4. Structured Surveys

Structured surveys use a survey instrument for developing database for quantitative indicators. The survey instruments provide the sequence and structure of questions in a manner that lends ease of data collection and builds in cross verification of facts.

The survey instrument is generally accompanied by a survey manual which explains to the interviewer the relevance of each question from the perspective of the survey objective. The quality of the primary data are inversely related to the interview time and thus the need to keep the questionnaire as concise as possible. It should not take, on an average, longer than 20 minutes to canvass the survey instrument.

Primary data are generally collected on stratified random sample basis rather than census since the latter is highly resource intensive both in terms of finances and time. The representation of the sample selected for the survey is critical. The strata defined for the sample should be spatially representative of city wards and types of settlements and also cover various socio-economic segments of city population. The sample respondents should be selected at random, where hypothetically speaking the mayor and a sanitary worker have equal probably to getting selected, to remove biases and easy access considerations. The representation of sample is more important than sample size and robustness for developing primary data for indicators-based assessment which does not involve econometric analysis.

To differentiate between key informant interview and structured surveys, key informants provide information about others but respondents in structured surveys answer questions about themselves. While similar questions are asked to each respondent in informal surveys, different sets of questions are put to key informants of different backgrounds. Also, sampling space of key informants is significantly lower than surveys.

## Common Structure for the Interviews:
- Start the session with a brief introduction of the interviewers and the objectives of the assessments.
- Highlight the importance of confidentiality and anonymity of the responses, to gain their trust.
- Start with easy questions to ease the respondents into the assessment.
- Keep questions open-ended.
- Respect the informant's views without interfering.

- Allow a natural flow in the discussion with flexibility of reframing questions.
- Sensitive issues should be taken up in a gradual manner
- Allow time to interviewee to frame their thoughts
- End the session by summarizing the discussion and highlighting key insights, followed by thanking them

**How to Make Primary Data Collection Rapid:**
- The teams should be structured in such a manner that there are multiple smaller teams rather than a few big teams. This will ensure that many interviews can be conducted, the data collected and analysed simultaneously by many teams.
- The objective of the assessment should be clearly understood by all team members so that only relevant data is recorded for analysis.
- Respondent interviews must be scheduled in a strategic manner to ensure maximum attendance and efficient usage of time.
- The team should have a list of questions prepared beforehand, so as to save time during the interviews. However, it is important to allow for flexibility during the course of the interview, in order to unearth and incorporate new insights. Immediately after the discussions, the collected data should be analysed and recorded in a daily summary report.
- A note should be made on any changes that are required in the questions or the operations of the assessment
- This process of iterated data collection greatly reduces the duration of final data analysis, as most of the data is already analysed during data collection.
- After a significant number of interviews have been conducted, it is recommended to conduct and record cross-case comparisons. These comparisons aid in recognizing and analysing common themes and patterns across the interviews. This analysis will ultimately form an integral part of the final report and contribute to expediting the final data analysis.
- During the daily data collection and analysis, it is important for the teams to incorporate the secondary data and systems perspective while understanding and reporting ground.[44]

Data collected will require cleaning and processing of the data before it's use for analysis, as is explained in Section 8 . The schematic of data collection and data management may be done as is recommended in Section 5. The following sections of the toolkit provide an exhaustive list of Indicators which are relevant for assessing the Urban Neighbourhoods for their ITC preparedness. These indicators may be complemented with city-specific indicators which present the local ground realities. The recommended indicators are based on various pre-existing guidelines and documents such as URDFI Guidelines, 2014 (MoHUA) ; Urban Greening Guidelines, 2014 (TPCO, GoI) ; NBC, 2005 (BIS, GoI); National ECCE Policy, 2013 (MoWCD) ;UNICEF ECD Reports ;I-CHILD Document (CFSC, NIUA& BvLF); ITCN Framework Documents (BvLF & NIUA);  to name a few.

# |7.3  Rapid Assessment

As mentioned in Section 5, the Rapid Assessment is an evaluation of the city enabling environment to promoting early childhood development and is based on the basic parameters for addressing the needs of ITC. A basic analysis will help assess the gaps in the existing built environment and social infrastructure from the ITC lens. Primarily the objective of the rapid assessment is to provide the rudimentary analysis of ITC-focused provisions and whether or not these facilitate thriving environments for their young children and caregivers. The indicators-based rapid assessment is a macro-level diagnostics of socio-economic parameters, built environment, safety, governance and planning that foster the quality of life of young chidren in cities. The assessment will help the ITC task force to prioritize neighbourhoods for pilot demonstration interventions; prepare an action plan to scale up the lighthouse demonstration projects to promote ITC-friendly neighbourhoods at city-wide scale; and, for the purpose, assign specific roles and responsibilities to various city stakeholders.

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44 Reference: Toolkit on Rapid Assessment, NITI Aayog (Development, Monitoring and Evaluation Office) July 2020

The Rapid Assessment will form the foundation for setting up a centralised data centre in the city for planning, programme design and monitoring and evaluation. It will also help to develop a shared understanding of the legal, policy and institutional framework within which the ULB is embedded, its governance structure, the functional mandate under the state municipal act, and the annual development funds available and its use to meet the competing investing needs – all important considerations in developing rolling action plans to promote ITC-friendly neighbourhoods on a city-wide scale.

The local bodies should be responsible for the rapid assessment and should have a comprehensive plan for data collection, cleaning, analysis and identification of gaps to achieve the ITC objectives. It will also help in assessing the inclusion of young children and family in the larger vision of the city and its planning strategies.

## Transect Walks of Selected Neighbourhoods

Transect walks are a participatory exercise, where members of the community, and planners and other municipal officials walk through various areas in a neighbourhood, interviewing passers-by to map observations on characteristics, risks and existing solutions. The exercise is particularly useful for urban planners to develop an understanding of the neighbourhood and establish contact with the community leaders and residents. The transects are an essential tool to identify how urban spaces are utilized during different times of a day, week and year. Thus, they help to identify the activity centres in the neighbourhood (Refer Pg. 52, pt. iii) which have maximum use for the ITCs.  Transect walks need to be done at various times of a day and a week to ensure that all uses of the spaces are identified.[45] This can be part of both rapid and in-depth assessment.

**Methodology for conducting Transect Survey:**

- Form a group of experts including community and elected representatives, CSOs, Municipal Officials, Local Leaders, Anganwadi workers and other relevant persons in the pilot neighbourhood – it is important that the group is inclusive and representative of the marginalized population segments including the ITC, PwDs and the deprived households.

- The route for transect walk should cover various parts of the neighbourhood including the spaces considered unsafe for the ITC and women.

**Key observations to be made during Transect Survey:**

- Kind of gathering spaces, activities and engagement happening in the place

- Peak time of the day and average footfall during different times of the day

- Usage of service infrastructure in any peculiar manner depicting latent needs of children & caregivers

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45 https://parcitypatory.org/2017/10/29/transect-walks/

| Transect Survey Format (Same format will be used in rapid and in-depth assessment) | | | | | |
|---|---|---|---|---|---|
| Name of the Locality/RWA/ Neighbourhood | | Time of Survey: | | Date | |
| Type of Settlement | Formal / Informal | | | | |
| Legality of Settlement | Legal/Illegal | | | | |
| If Informal, What Type | Notified Slum/ Non-Notified Slum/ Recognised Slum/ Squatter Settlement | | | | |
| Number of Households in the neighbourhood | | | | | |
| Approximate Household Size (average number of persons per household) | | | | | |
| Built use of the neighbourhood | Mixed Use/ Residential/ Recreational/Commercial/Any Other Land Use Specified by Development or Master Plan | | | | |
| Average building heights in the neighbourhood | Single Storied/Double Storied/Multi Storied | | | | |
| Type of Houses (in percentage) | Kacha Semi-Pucca (Mud/brick Walls and CGI roof) Pucca | | | | |
| Availability of night/mobile shelters for women and/or children | Yes/No. If yes, Location of the space, capacity and ease of availability | | | | |
| Availability of Police Posts in neighbourhood | Yes/No. If yes, Location and no. of policemen assigned. Major law and order issues in the neighbourhood and responsiveness of the police | | | | |
| Availability Police Stations in neighbourhood | Yes/No. If yes, Location | | | | |
| Availability Sub fire station/ Fire Post in neighbourhood | Yes/No. If yes, Location. Major fire hazard and mitigation measures? Any specific challenges for the fire engine to reach and transect the neighbourhood? | | | | |
| Availability of Tot Lots/ Neighbourhood Parks/ Children Parks within 15 minute walking radius | Yes/No. If yes, Location, size and challenges, for example encroachments or children pre-empted from its use by persons in other age groups or problems in accessing for ITC?? | | | | |
| Availability of Pre-Primary school, Nursery, Creche within 15 minute walking radius | Yes/No. If yes, Location, capacity and ease of availability | | | | |
| Availability of PHC, Anganwadi, Hospital within 15 minute walking radius | Yes/No. If yes, Location, capacity and ease of availability | | | | |
| Availability of shaded walkways in the neighbourhood | Yes/No. If yes, Mapping of the streets | | | | |
| Availability of footpaths with width greater than 2.5m in the neighbourhood | Yes/No. If yes, Mapping of the streets. Also <2.5 metres. | | | | |
| Availability of Signalised Intersections | Yes/No. If yes, Mapping of Intersections | | | | |
| Availability of No-Honking Zones | Yes/No. If yes, Mapping of Zones | | | | |
| Presence of Seating Infrastructure along the streets | Yes/No. If yes, Mapping of the streets | | | | |

## Activity Mapping of ECD Support System

ITC is a dynamic group with multiple interactions with their neighbourhood. Hence, the sites of their activity are an ideal place for collection of data pertaining to their needs. Table 5 provides an exhaustive list of activity areas which may be available at the neighbourhood level for ITC. [46] These can be covered under both rapid and in-depth assessment.

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46 (URDPFI Guidelines, 2014, pp. 61, 360,361,362)

Purpose – Activity mapping intends to study the activity patterns of the users that can be shaped to understand the behavior of target population. Observations are taken at different times of a day to map different patterns over the day. It includes observing and recording various kind of activities taking place, specific location of gathering, intent of gatherings, footfall at various times of the day and any specific behavior of children and their caregivers during the time of engagement.

Activity mapping will be conducted by the same group of people conducting Transect walk.

Outcome – Activity mapping helps to understand the latent need of users in the space, peak hours of engagement and requirement of additional ancillary infrastructure.

Table 5 Activity Centers of ITC – Early Childhood Development Support System

| List of Activities | Area | Rationale |
|---|---|---|
| Tot Lot | 50-125sqm. Covering a total area of 750sqm | Urban greening guidelines specify 1 per 2500 population. (Urban Greening Guidelines, 2014, p. 7) |
| Housing Area Park | 2,500 - 5,000sqm. covering a total area of 15,000sqm | URDPFI guidelines specify minimum width 15 m |
| Neighbourhood Park/ Playground | 4,500-6,000sqm covering a total area of 18,000sqm | URDPFI guidelines specify one for every 5 000 may be combined with schools. |
| Day Care Centers or Crèches | Walking distance of 5-10 minutes or 150-300m are of 6-8 sq. ft. per child | RAJIV GANDHI NATIONAL CRECHE SCHEME FOR THE CHILDREN OF WORKING MOTHERS: https://wcd.nic.in/sites/default/files/Revised%20RGNCSScheme_210515.pdf |
| Pre- Primary, Nursery School | 5-15 minutes walking distance (300-800m) | URDPFI suggests 1 school serves 2500 population and that it should be located near a park |
| Dispensary | Placed at walking distance of 5-10 minutes or 150-300m | URDPFI guidelines suggest that the distance between the two dispensaries should be 2-4 kms |
| Anganwadi | Placed at walking distance of 5-10 minutes or 150-300m | URDPFI guidelines suggest that the distance between the one per 5000 population |
| Nursing home, child welfare and maternity centre | Placed at walking distance of 5-10 minutes or 150-300m | URDPFI guidelines suggest that the distance between the one per 45000 - 1 Lakh population |
| Orphanage/ Children's Centre (One each) | Maximum 1000 sqm Land subject to availability | URDPFI guidelines suggest that the distance between the one per 10 Lakh population |
| Care centre for physically / mentally challenged | Maximum 1000 sqm Land subject to availability | URDPFI guidelines suggest that the distance between the one per 10 Lakh population |

# |7.4  Indicators for rapid assessment

Table 6 presents an exhaustive list of Indicators for ITC-focused Rapid Assessment. Data Analysis and Visualisation of the indicators is explained in Section IX. These indicators can be collected annually by the interdisciplinary core team as outlined in the Section 6 . The data sources mentioned against each indicator are suggestive and may require further modifications based on the municipal structure in the respective cities as per the State Municipal Acts. The Benchmarks, where available have been identified based on existing guidelines, policies and laws. However, cities may choose to formulate their own vision and create benchmarks suited to them, where benchmarking is not available.

**Table 6 Indicators for Rapid Assessment - Exhaustive List**

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|---|---|---|---|---|---|---|---|
| **Socio – Economic Indicators** | | | | | | | | |
| 1 | Pregnant women – Number of pregnant women in the city | Number | Multiply the birth rate[47] (per 1000 population) of urban area with the population of the city and then divide it by 1000 (A)<br><br>Correction factor: 10 % of (A) considering the abortions[48] and stillbirths[49] (B)<br><br>Estimated pregnancy in a year (C):<br><br>A + B | NA | ITC | Birth Rate: Sample Registration System (SRS) Bulletin, office of the Registrar General, India<br><br>https://censusindia.gov.in/nada/index.php/catalog/42687/download/46357/SRS_Bulletin_2020_Vol_55_No_1.pdf<br><br>(Refer page # 4)<br><br>Population of city:<br><br>Municipal Town Planning Department, Census tables | Government of India (censusindia.gov.in) | Secondary | To estimate the pregnant women in the city – relevant for provision of ITC services and facilities |
| 2 | Young children: City's Population in 0-6 years age group | % | Numerator: Difference between Sum total of No. of Births Registered in the past 6 Years and Sum Total of No. of deaths of children below the age of 6 years registered in the past six years<br><br>Denominator : Population of City in the current year (Estimate or Census) | NA | ITC | Numerator : Municipal Public Health Department, National Portal of India https://www.india.gov.in/gsearch?s=Birth%20Certificate , Integrated Child Development Services (ICDS)<br>Denominator: Municipal Town Planning Department, Census tables | Government of India (censusindia.gov.in) | Secondary | To estimate the ITC constituency in the city – relevant for provision of ITC services and facilities |

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*47 Birth Rate is a crude measure of fertility of a population and is a crucial determinant of population growth. It gives the number of live births per thousand population in a given region and year. District-level, state-level, national-level figures can be used (in order of preference).*

*48 Abortion: If the foetus dies before 6 months and 15 days of gestation (duration of pregnancy). An abortion can occur naturally (miscarriage) or it can be performed by a medical person (Medical Termination of Pregnancy: MTP).*

*49 Still birth: Baby (more than 6 months and 15 days gestation) is born without any sign of life1 i.e., breathing, crying or movement of limbs; and hence, is dead at birth.*

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|-----------|-------|----------|-----------|-------------|--------|--------------------|-----------------------------------|
| 3 | Infants and Toddlers: City's Population in the age group 0-3 years50 | % | Numerator: Difference between Sum total of No. of Births Registered in the past 3 Years and Sum Total of No. of deaths of children below the age of 3 years registered in the past 3 years<br><br>Denominator : Population of City in the current year (Estimate or Census) | NA | ITC | Numerator: : Municipal Public Health Department, National Portal of India https://www.india.gov.in/ gsearch?s=Birth%20Certificate, Integrated Child Development Services (ICDS)<br>Denominator: Municipal Town Planning Department, Census tables | Government of India (censusindia.gov.in) | Secondary | To estimate the infants and toddlers constituency in the city – relevant for provision of services and facilities for infants and toddlers |
| 4 | Young Children Sex ratio (females/ 1,000 males) | Ratio | Numerator: Number of female child births in the last 6 years Denominator: Number of male child births in the last 6 years multiplied by 1000 | 1000 | ITC | Municipal Public Health Department, National Portal of India (https://www.india. gov.in/gsearch?s=Birth%20Certificate ), Integrated Child Development Services (ICDS)<br><br>Census tables | Government of India (censusindia.gov.in), Website of Municipal Corporation/Municipal Council/other urban local bodies | Secondary | To provide gender responsive ITC facilities and services |
| 5 | Concentration of Young children in Slums: Percentage of children in 0-6 years age group living in slums51 in the city | % | Numerator: Number of children in 0-6 years age living in slums of city<br><br>multiplied by 100 Denominator: Total number of children in 0-6 years age in the city | NA | ITC | Department of Town Planning, India - PCA SLUM: Primary census abstract data for slum, India & States/UTs - Town Level - 2011 (censusindia.gov.in)<br><br>District Census Handbook, Census tables Government of India (censusindia.gov.in), District website,<br><br>Planning Department Municipal Corporation | Secondary | To assess the young children living in vulnerable conditions – relevant to designing ITC-related services which can be adopted in informal settlements |

50 Birth to 3 years of age
51 All types of slums in the city, as defined by the Census of India.

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|-----------|-------|----------|-----------|-------------|--------|---------------------|-----------------------------------|
| 6 | Young Children with Disabilities: Percentage of young children with disabilities by types of Disabilities[52] (based on certificates) | % | Numerator: Number of children in 0-6 years age with disabilities multiplied by 100. Denominator: Total number of children in 0-6 years age in the city | NA | ITC | Department of Social Justice or equivalent, Municipal Corporation/ Municipal Council/other urban local bodies Census tables \| Government of India (censusindia.gov.in), Education Department, Official Website of Samagra Shiksha53, Integrated Child Development Services (ICDS) | Secondary | To understand the varying development needs of ITC – relevant to the design of facilities for young children |
| 7 | Gender Distribution of Young Children with disabilities: Percentage of female young children with various forms of disabilities (based on certificates) | % | Numerator: Number of female children in 0-6 years age with disabilities multiplied by 100. Denominator: Total number of children with disabilities in 0-6 years age in the city | NA | ITC | Department of Social Justice or equivalent, Municipal Corporation/ Municipal Council/other urban local bodies Census tables \| Government of India (censusindia.gov.in), Education Department, Official Website of Samagra Shiksha[54], Integrated Child Development Services (ICDS) | Secondary | To understand the varying development needs of ITC by gender – relevant to the design of facilities for young children |
| 8 | Gender Distribution of Young Children with disabilities: Percentage of male young children with various forms of disabilities (based on certificates) | % | Numerator: Number of male children in 0-6 years age with disabilities multiplied by 100. Denominator: Total number of children with disabilities in 0-6 years age in the city | NA | ITC | Department of Social Justice or equivalent, Municipal Corporation/ Municipal Council/other urban local bodies Census tables \| Government of India (censusindia.gov.in), Education Department, Official Website of Samagra Shiksha[55], Integrated Child Development Services (ICDS) | Secondary | To understand the varying development needs of ITC by gender – relevant to the design of facilities for young children |

52 Refer https://www.swavlambancard.gov.in/cms/about-persons-with-disability : locomotor disability; visual impairment; chronic neurological conditions; persons affected with blood related disorders; developmental disorders; mental illness; and multiple disabilities;

53 https://ssa.uk.gov.in/pages/display/95-disabled-children

54 https://ssa.uk.gov.in/pages/display/95-disabled-children

55 https://ssa.uk.gov.in/pages/display/95-disabled-children

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|-----------|-------|----------|-----------|-------------|--------|---------------------|-----------------------------------|
| 9 | Orphan Young Children: Registered orphan young children as percentage young children in the age group 0-6 years | % | Numerator: Number of registered orphans under the age of 0-6 years in the city Denominator: Total number children under 0-6 years age in the city | NA | ITC | Central Adoption Resource Authority, State Adoption Resource Agency, Department of Women and Child Development (https://wcd.nic.in/), District Police, District Child Protection Unit, Denominator: Municipal Town Planning Department, Census tables \| Government of India (censusindia.gov.in) | Secondary | To understand the varying development needs of ITC – relevant to planning the capacity of orphanages and related social facilities |
| 10 | Orphan young children with disabilities: Percentage of orphan young children with disabilities | % | Numerator: Number of orphan children in the age group 0-6 with disabilities Denominator: Number of orphan children in the age group 0-6 years in the city | NA | ITC | Numerator: Central Adoption Resource Authority, State Adoption Resource Agency, Department of Women and Child Development, District Police, Department of Public Health, Municipal Corporation/ Municipal Council/other urban local bodies, Census India (Table C20) (https://censusindia.gov.in/DigitalLibrary/Tables.aspx) Denominator: Municipal Town Planning Department, Census tables \| Government of India (censusindia.gov.in) | Secondary | To understand the varying development needs of ITC – relevant to the design of orphanages and related social facilities |
| 11 | Homeless People: homeless population as percentage of city's population | % | Numerator: Number of homeless people in the city Denominator: Total population of the city | NA | ITC | Numerator: Department of Town Planning, Department of Poverty Alleviation; Municipal Corporation/ Municipal Council/other urban local bodies Urban Development Department Denominator: Municipal Town Planning Department, Census tables \| Government of India (censusindia.gov.in) | Secondary | To understand the varying development needs of ITC – relevant to planning the capacity and design of night shelters and related social facilities |

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|---|---|---|---|---|---|---|---|
| 12 | People in Untenable Slums: percentage of city's population living in untenable slums | % | Numerator: Number of people living in untenable slums Denominator: Total population of the city | NA | ITC | Department of Town Planning, Department of Poverty Alleviation; <br><br> Municipal Corporation/ <br><br> Municipal Council/other urban local bodies, <br><br> Slum Free City Plan of Action developed under Rajiv Awas Yojana, City Level Surveys, Slum Improvement Board[56] | Secondary | To understand the varying development needs of city's ITC – relevant to planning, implementing rehabilitation and redevelopment of slums |
| 13 | Slum Concentration: percentage of city's population living in slums | % | Numerator: Number of people living in slums Denominator: Total population of the city | NA | ITC | Department of Town Planning, <br><br> Municipal Corporation/ <br><br> Municipal Council/other urban local bodies, <br><br> District Census Handbook, Census tables \| Government of India (censusindia.gov.in) | Secondary | To understand the varying development needs of city's ITC – relevant to planning, implementing rehabilitation and redevelopment of slums |
| 14 | Pre-school Enrolment: Percentage of children in the age group 2-6 years registered through the last year enrolments in Pre-schools, Pre-schools running in Primary Schools and Aanganwadis | % | Numerator: Sum of number of children registered in pre-schools, pre-schools running in primary schools, Aanganwadis in each neighbourhood/ locality multiplied by 100 Denominator: Number of children in the age group of 2-6 in city | 100% according to (MoWCD, GoI, 2013) | TC (Toddlers and Caregivers) | Municipal Corporation (Education Department), Department of Education (State Government), Integrated Child Development Services (ICDS) | Secondary | To estimate the unmet demand/need for pre-school education at the city level and spatial distribution of preschools. |
| **Built-Environment Indicators** | | | | | | | | |

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|-----------|-------|----------|-----------|-------------|--------|---------------------|-----------------------------------|
| 15 | Childcare Facilities: Availability of crèches (government, NGO supported and private) for young children (0-6 years) in the city | Yes/No If yes, then: Map | Map of crèches in the city | As per the guidelines related to Rajiv Gandhi National Creche Scheme for the children of working mother | ITC | List of Crèches Available - ULB- Public Health Department, Town Planning Department(GIS Map if available), Municipal corporation | Secondary | To assess the spatial distribution of caregiving infrastructure in the city and identify deficient areas where infrastructure needs to be augmented. |
| 16 | Health Care Facilities: Availability of health care facilities[57] (public and private) for young children in the age group 0-6 years and their caregivers | Yes/No If yes, then: Map | Map of dispensaries, AWCs, paediatric, UPHC and Unani centers Nursing home, child welfare and maternity centres, Family Welfare Centres in the city | Table 8.4.3, (URDPFI Guidelines, 2014, p. 360) | ITC | Health Department, Municipal Corporation, Health and Family Welfare Department | Secondary | To assess the spatial distribution of health infrastructure in the city and identify the deficient areas where health infra needs to be augmented |
| 17 | Early Childhood Educational Facilities: Availability of Early Childhood educational facilities (public and private) for young children in the age group 3-6 years in the city | Yes/No If yes, then: Map | Map of Aanganwadis, nursey, pre-schools and pre-schools running in primary schools in the city | Table 8.48, 8.51, (URDPFI Guidelines, 2014, pp. 361, 362) | ITC | Municipal Corporation (Education Department), Department of Education (State Government), Municipal Corporation / Municipal Council / Other Urban Local Bodies, Department of Women and Child Development, District Website, District at a glance book[58] | Secondary | To assess the spatial distribution of educational infrastructure in the city and identify the deficient areas where educational infrastructural needs to be augmented |

57 (URDPFI Guidelines, 2014, p. 360): Nursing home, child welfare and maternity centre; Dispensary, AWCs, Family Welfare Centre

58 https://nainital.nic.in/district-at-a-glance/

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|-----------|-------|----------|-----------|-------------|--------|---------------------|-----------------------------------|
| 18 | Child Care Institutions: Availability of Child Care Institutions (Refer Page 6, pt. 11) in the Toolkit | Yes/No If yes, then: Map | Map of Child Care Institutions in the city | Table 8.48, 8.51, (URDPFI Guidelines, 2014, pp. 361, 362) | ITC | Central Adoption Resource Authority (CARA), State Adoption Resource Agency, Department of Women and Child Development | Secondary | To assess the availability of child care institutions in the city and to take necessary action to fill the gaps, if any. |
| 19 | Parks and playgrounds: Availability of public parks in the city, as per the planning norms, that have facilities[59] for young children in the age group 0-6 years and their caregivers | Yes/No Map | | Table 8.54, (URDPFI Guidelines, 2014, p. 363); (PART 3 Development Control Rules and General Building Reuirements - National Building Code, 2005, p. 61) | ITC | Municipal Engineering Department, Horticulture Department, Town Planning Department, Development Authority | secondary | To assess the availability and access to play spaces for children and setting understanding and real use capacity of these play facilities. |
| 20 | Access to Piped Water: Percentage of wards in the city having 100% coverage of piped water supply | % | Numerator: No. of wards having 100% coverage of piped water supply Denominator: Total number of wards in the city | 100%, SBM, AMRUT Guidelines | ITC | Municipal Engineering Department, Jal Jeevan Mission, Water Supply Department | Secondary | To assess the access to basic services for city population |
| 21 | Access to Safe Sanitation Facility: Percentage of city population with access to safe toilets | % | Numerator: Number of households having access to toilets in the city Denominator: Total number of households in the city | 100%, SBM AMRUT guidelines | ITC | Municipal Engineering Department | Secondary | To assess the access to basic services for city population |

59 Interactive walls, visual elements, sensory elements, sand pits, telephone pipes, drums, spinners, pathways, deck and gazebos, benches, seating arrangements at different heights, drinking water and toilets - age intensive, jogging tracks and exercise units, feeding enclosure, etc.

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|-----------|-------|----------|-----------|-------------|--------|---------------------|-------------------------------------|
| 22 | Solid Waste Collection: Percentage of wards in the city having 100% coverage of door-to-door solid waste collection | % | Numerator: No. of wards with 100% coverage of door-to-door solid waste collection Denominator: Total number of wards in the city | SBM, AMRUT Guidelines | ITC | Municipal Health Department, Swachh Bharat Mission (SBM), City Sanitation Plan developed by Municipal Corporation | Secondary | To assess the access to basic services for city population |
| | **Safety Indicators** | | | | | | | |
| 23 | NMT Penetration: Availability of closed street for NMT (temporary or permanent) in City with their Locations | Binary (Y/N) | | (SLBs for Urban Transport, 2014) | ITC | Traffic police Department | Secondary | To assess the safe access to city spaces |
| 24 | Safety of Young Children: Percentage of wards in the city with Crime Rate against children greater than the City Crime Rate | % | Numerator: No. of wards with crime rate against children higher than the average city crime rate Denominator: Total number of wards in the city | NA | ITC | Numerator: Neighbourhood Police Station / Stations in the concerned Ward, City Police Headquarters Denominator: Municipal Corporation / Municipal Council / Other Urban Local Bodies, | Secondary | To identify areas which require additional safety interventions for children |
| 25 | Safety of Women: Percentage of city wards with Crime Rate against women greater than the average City Crime Rate | % | Numerator: No. of wards with crime rate against women higher than the average city crime rate Denominator: Total number of wards in the city | NA | ITC | Neighbourhood Police Station / Police stations in the concerned Ward, City Police headquarters, National Crime Records Bureau (NCRB) (https://ncrb.gov.in/en/statistical-branch) | Secondary | To identify areas which require additional safety interventions for caregivers |
| 26 | Footpaths: Percentage of road length having footpaths in the city | % | Numerator: Road length with footpaths by Denominator: Total road length | NA | ITC | Public Works Department , Road and Traffic Department, Municipal Corporation / Municipal Council / Other Urban Local Bodies | Secondary | To assess safe access to city spaces |

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|---|---|---|---|---|---|---|---|
| 27 | Traffic Junctions: Percentage of intersections around schools which have traffic signals | % | Numerator: Number of junctions around school which have traffic signal by Denominator: Total number of junctions around school | NA | ITC | Town & Country Planning Department/ Traffic Department, Engineering Department, Municipal Corporation / Municipal Council / Other Urban Local Bodies | Secondary | To identify areas around pre-primary, primary schools having pre-primary wing, and Anganwadi centres which have traffic signals |
| 28 | Percentage of parks covered with street lights | Binary (Y/N) | Numerator: No. of parks covered with street lights Denominator: No. of parks in the city | NA | ITC | Municipal Corporation / Municipal Council / Other Urban Local Bodies | Secondary | To identify if the areas are navigable during night time |
| **Governance and Planning Indicators** | | | | | | | | |
| 29 | ITC-focussed data collection in City Development Plan: Does the city master plan/ development plan/ local area plan focus on collecting ITC-related data | Binary (Y/N) | | NA | ITC | District Town and Country Planning Office, Municipal Town Planning Department, Municipal Commissioner Office, Development Authority | Secondary | To assess the city's sensitization towards the ITC needs |
| 30 | Planning tools: Does the ULB have a digitized GIS-based map of the city planning area? | Binary (Y/N) | | NA | ITC | District Town and Country Planning Office, Municipal Town Planning Department | Secondary | To assess the city's ability to adopt GIS-based tools for multi-stakeholder consultations and plan revisions |

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|-----------|-------|----------|-----------|-------------|--------|--------------------|------------------------------------|
| 31 | City Vision: Does the city have vision documents addressing early childhood development issues in the city? (smart city vision[60] in smart city proposal) | Binary (Y/N) | | NA | ITC | Smart City SPV[61], Municipal Commissioner Office | Secondary | To assess the city's preparedness to identify areas of immediate concern and to assess the prioritization of ECD issues in the city's long-term vision and for advocacy on the need to focus on ITCN to achieve its stated vision |
| 32 | Institutional Stakeholders Consultation Process: Does the city have a mechanism for engaging with caregivers of young children amongst key stakeholders in preparing development plans and programmes? (Eg. Municipal Committees with representatives of CSOs) | Binary (Y/N) | | NA | ITC | Municipal Commissioner Office, Women and Child Development Department and any other relevant Department | Secondary | To assess the city's ITCs' participation in the project cycle – planning, implementation of development programmes, and monitoring and evaluation |

60 Cities should incorporate ITC key elements into their vision statements (safe, inclusive, accessible, playful and green)
61 Special Purpose Vehicles

| # | Indicator | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source | Expected output from the indicator |
|---|-----------|-------|----------|-----------|-------------|--------|---------------------|-------------------------------------|
| 33 | ITC-related Infrastructure: Infrastructure projects undertaken specially for young children (0-6 years) and their caregivers as percentage of projects implemented by ULB, Smart City, AMRUT and other schemes[62] during the last 5 years | % | Numerator: Number of infrastructure projects for ITC in the last 5 years Denominator: Total number of infrastructure projects in the last 5 years | NA | ITC | Smart City SPV, Municipal Commissioner Office , Municipal Engineering Department, development Authority, and any other relevant Department | Secondary | To assess the infrastructure planned for ITC |
| 34 | Capacity Building on ECD: Does the city train the service providers on the importance of Early Childhood Development in urban planning? | Binary (Y/N) | | NA | ITC | Municipal Commissioner Office , ICDS, Women and Child Development Department, development Authority, and any other relevant Department | Secondary | To assess the capacities of service providers for catering to ITC needs |

*62 Children Parks, Place Making, Beautification of walls, Paintings on public spaces, Interactive Streets, Shading of Streets, Seating infrastructure, Street Lighting, etc.*

### Journey from Rapid Assessments to In-Depth Assessments

The rapid assessment helps in understanding the complexity of ITC-related development issues at the macro-level through a problem solving approach, the city-level secondary data-based analysis may be complemented with an understanding of the communities through activity mapping and transect walks. The rapid assessments help in developing a quick and evidence-based understanding of the need to integrate ITC-related components in city development efforts. The next step is to develop an in-depth evaluation metrics to identify and prioritise interventions based on a nuanced understanding of behavioural components and social areas of change, among others. Whereas rapid assessments help to develop critical insights on public policies and character of the city, the exploration of unchartered territory is enabled through in-depth assessment, to unearth a rare insider's view on social and spatial challenges of spaces and how they are viewed. Figure 08 shows Journey graph documenting the breakdown of steps from rapid to in-depth assessment.

**Figure 8: Journey Graph from Rapid to In-depth Assessment**



| Identifying the assessment area and sample space | Data Evaluation at Macro Level (Rapid Assessment) | Understanding quantitative & qualitative aspects of the area |
| Formulation of Objectives Tree through Progress Tree | Conducting primary surveys and encouraging community engagement | Data Evaluation at Micro Level (In-Depth Assessment) |
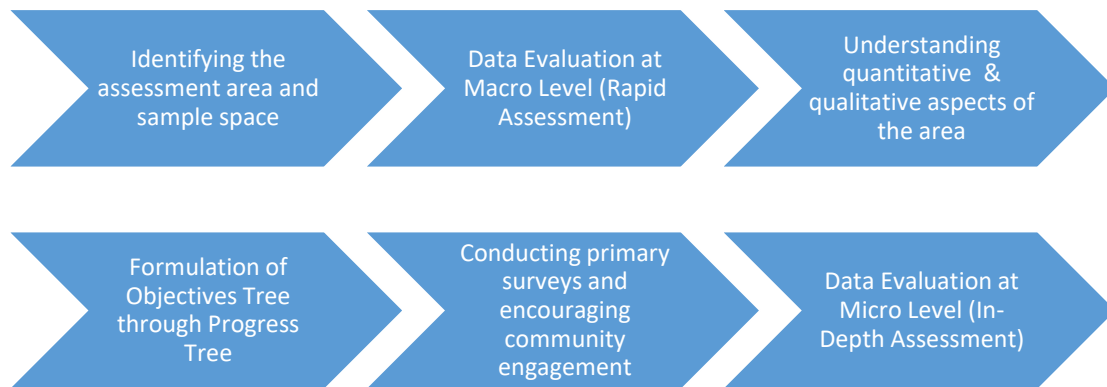
# |7.5  In depth Assessment

An evidence-based evaluation process needs to be adopted for assessment of the effectiveness of the policies and programmes implemented by the government agencies. An in-depth analysis is recommended for a comprehensive assessment of the city and neighbourhoods' responsiveness to ITC needs, using the theme-based indicators included in the Rapid Assessment framework. Such analysis will provide a detailed and granular assessment of the gaps in the adequacy and quality of services.

In-depth assessment requires extensive data collection using various methods. This toolkit provides an insight into the literature, data analysis tools, data collection methods and best practices for developing database for promoting ITC responsiveness at city- and neighbourhood-level. The in-depth assessment of the neighbourhood involves the following steps:

### 1. Identification of Low Hanging Fruits – Pilot Areas

The rapid assessment of the city would enable the concerned agency to identify the areas/neighbourhoods which can be transformed with minimal interventions and maximum reach to young children and their caregivers. Cities can start with an in-depth assessment in these pilot neighbourhoods – one each in formal and informal settlement preferably. These can then act as light house projects which will encourage city champions to plan, retrofit and develop ITC friendly neighbourhoods at city-wide scale.

### 2. Establishing Sampling group:

The toolkit has been prepared for children between the ages of 0-6 years. Caregivers include mothers, fathers, siblings, cousins, teachers, day-care centre workers and grandparents - basically anybody who takes on the role of taking care and nurture of the child. A child can have one or multiple caregivers. The sampling of number of citizens to be surveyed  can be decided based on the frequency of activities and size of the activity center

selected for survey. It is encouraged to include marginalized and weaker sections of society in the sampling group.

### 3. Primary Surveys:

In the absence of community-level secondary database, the ITC-focused planning at the neighbourhood level will require primary surveys to assess the neighbourhood level facilities available at each of the activity centers for the ITC. Activity centers will be identified during transect walks and activity mapping of the neighbourhood. It can be any designated or organically grown place for gathering, play areas, interaction or any other type of engaging activity for young children & their caregivers. The primary surveys need to be undertaken on an annual basis as five-yearly and decennial planning processes would be inappropriate for effectively meeting the ITC needs.

# | 7.6  In-Depth Assessment Tool

The tools suggested to carry out in-depth analysis are diversified forms of surveys, transect walks, activity mapping and tactical urbanism initiatives. An intercept survey is a research method used to gather onsite information from a target group[63]. This tool facilitates collation/collection of extensive data but is resource intensive in terms of labour, time and finance[64]. In the case of ITCN, the tool can be used to collect information on time spent by the caretakers and children at a place and reasons thereof. The cities and agency carrying out these surveys can learn how people perceive a place and track sentiment. These are used at a specific site or for comparisons across a city. They are valuable as an evaluation tool, and measure before and after a concrete intervention in a public space.

### Methodology for conducting the survey(s):

- The intercept surveys should to be conducted **at all the public spaces/activity centres of ITC (Refer Survey Formats)** in the neighbourhood **to develop a comprehensive understanding of their needs and challenges**. The public space/activity centres of ITC in neighbourhood can be any allocated or unallocated places of gathering for interaction and play, and can be identified through activity mapping. If the neighbourhood has multiple activity centres of similar use, the surveyor may choose a representative sample of the activity area.

- The surveyor should approach people with young children 0-6 years. The questionnaire is tailored to that demography, but if others are curious they can be included in the survey as well. However, people who can answer from the perspective of a caregiver and young child must be the target interviewee. Members/representatives of all sections of the community should be included amongst the interviewees.

- Where applicable, the survey should include a specific questionnaire for service providers to assess their perception about ITC friendliness of the public space/activity centres.

- The surveyors should be appropriately trained to develop a clear understanding on the purpose of the survey and relevance of each question, and also to develop their skills to conduct the survey and appropriately record their understanding.

- The survey questionnaire may be delivered verbally or by handing the respondent a form after taking consent from the respondent.

- A stratified random sampling approach may be adopted to ensure coverage of all sections of the community – spatially and socio-economic groups, and to remove the surveyors' bias in selection of the respondents, For example, in a busy area, the surveyor may consider asking every 3rd person to avoid surveyor bias (i.e. only surveying people the surveyor feels comfortable talking to).

- The time of the day for conducting the survey may be decided by keeping in view the working hours and

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63 https://www.surveymonkey.com/mp/intercept-surveys/

64 (Toolkit – For measuring urban experiences of young children, 2018, p. 30)

household chores schedule, and should be notified in advance to community members. The date and time of collection of the need to be recorded mandatorily on the questionnaire itself.

## Definitions for conducting the survey(s):

This section is provided separate from the definitions provided earlier for overall toolkit, for the ease of conduction of surveys.

1.  **Safety**
    *   Safety for ease of mobility
    *   Safety from crime
2.  **Classification of Houses**

    *   **Katcha house** - A Katcha house is one whose walls and roof are made of unburnt bricks, bamboo, mud, grass, leaves, reeds or of thatch.
    *   **Pucca house** - A pucca house is one whose walls and roof at least are made of burnt bricks, stone, cement concrete, jack board (cement plastered reeds) or timber. Tiles, galvanised iron or asbestos cement sheets and stone blocks used in construction of roofs are regarded as pucca material.
    *   **Semi Pucca house** - A semi pucca house is one which is neither exclusively pucca nor kuccha. Generally, a semi-pucca structure comprises walls made of pucca materials, namely, stones, oven burnt bricks, etc. And roofs made of Katcha materials, namely, mud, grass, etc. In some cases, it may consist of walls of katcha materials like unburnt bricks, bamboo, etc. and roofs of pucca material like timber, jack board, etc. [65]
3.  Marginalized and weaker sections of India include scheduled castes, OBCs and scheduled tribes, and minorities -- linguistic, religious and sexual. [66]

4.  **Classification of Roads**

    *   **Arterial Road** - Arterials are the roads laid inside the city or town for the movement of high volume of traffic. Arterials provide access to the highways.
    *   **Sub-Arterial Road** – A sub-arterial road is a road connecting arterial roads to areas of development, and carrying traffic directly from one part of a city to another.
    *   **Collector road** - Collector roads collect and deliver the traffic to and from local streets and arterials.
    *   **Local street** - Local Street are designed to provide access to individual properties in the City. [67]
5.  **Informal settlement:** Areas where groups of housing units constructed on land that the occupants have no legal claim to, or occupy illegally.

6.  Unplanned settlements and areas where housing is not in compliance with current planning and building regulations (unauthorized housing). [68]

7.  **Notified slum:** All notified areas in a town or city notified as 'Slum' by State, UT Administration or Local Government under any Act including a 'Slum Act' may be considered as Notified slums.

8.  **Recognized slum** - All areas recognised as 'Slum' by State, UT Administration or Local Government, Housing and Slum Boards, which may have not been formally notified as slum under any act may be considered as Recognized slums.

9.  Village Abadi means such land and building which is inhabited by the villagers including the plots of land in which cattle is penned, manure stored, straw stacked, and other activities related to community facilities and services are constructed or erected and other waste attached to the village site which is not assessed in land revenue. [69]

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65 https://documents1.worldbank.org/curated/en/116811468774964940/pdf/multi0page.pdf

66 https://study.sagepub.in/hasnain_mcwsis

67 https://civilread.com/road-types/

68 https://stats.oecd.org/glossary/detail.asp?ID=1351

69 https://www.lawinsider.com/dictionary/village-abadi#:~:text=Village%20Abadi%20means%20such%20land,village%20site%20which%20is%20not

10. Resettlement colonies – Colonies formed by the transfer of people (as a family or colony) to a new settlement (as after an upheaval of some kind). [70]

11. Urban local bodies include municipal corporation, municipal council and Nagar panchayat based on population size. The Nagar panchayat is for traditional areas, the municipal council or municipalities are for smaller urban areas and municipal corporation are for larger urban areas (74th Constitutional Amendment Act).

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70 https://www.vocabulary.com/dictionary/resettlement

Photograph by: Anirudh Rajesh

# Survey Formats

**(To be filled by Surveyor)**

## Purpose of the discussion

Good morning/afternoon/evening. Thank you for taking the time to talk to me today. My name is _____ and I am working with _____. We are doing a study to know more about your role as a caregiver and services provided in the public places for children below 6 years of age. The collected information will be used to understand the requirements of children & their caregivers in a public place.

## Procedure of the discussion

If you agree to take part in the interaction, our interaction will last approximately 15 minutes. It is important that you provide your honest opinions to help us understand the level of services in the neighbourhood. If you have any queries, please let us know before we can proceed further.

## Name of the Locality/RWA/Neighbourhood:

## Type of Settlement:

| | |
|---|---|
| Formal Settlement | 1 |
| Notified Slum | 2 |
| Non-Notified Slum | 3 |
| Recognised Slum | 4 |
| Squatter Settlement | 5 |
| Village Abadi/ Gamthal / Any other | 6 |
| Core City Area | 7 |
| Others Specify _____ | 8 |

Time of Survey:

Date:

Name and type of public space:

| | |
|---|---|
| Tot lots | 1 |
| Housing Area Parks | 2 |
| Neighbourhood Parks | 3 |
| City parks | 4 |
| Any other open space | 5 |
| Anganwadis | 6 |
| Creche | 7 |
| Educational Institution (Nursery / Pre-Primary School, etc.) | 8 |
| Street | 9 |
| Health Care Facility | 10 |

# A. Demographic Questions (Mandatory for all Public Spaces)

**Questions for Caregivers with young children**

1. Does the respondent identify as
   - ☐ Male
   - ☐ Female
   - ☐ Other

2. What is the respondent's age (in years)?
   - ☐ 0-15
   - ☐ 15-20
   - ☐ 20-60
   - ☐ 60+

3. Whether the respondent is a PwD?
   - ☐ Yes, Specify type _____
   - ☐ No

4. Occupational Status of the Respondent
   - ☐ Formal Sector employee: Government/Private
   - ☐ Formal Sector – self employed
   - ☐ Informal Sector worker: Self-employed workers/Tailors/Domestic House help/ Driver/Street vendor/ Beautician/Hotel Staff/Daily wage worker
   - ☐ Non-working
   - ☐ Home-maker
   - ☐ Student
   - ☐ Others specify_____

5. Where does respondent live? Also, the distance between home and activity centre, and mode of commuting?

   Please note respondent's postal code: _____

6. What type of settlement does the respondent reside in?
   - ☐ Formal Settlement
   - ☐ Informal Settlement (Notified Slum/ Non-Notified Slum/ Recognised Slum / Squatter Settlement)
   - ☐ Homeless

# B. General (Mandatory for all Public Spaces)

**Questions for Caregivers with young children**

1. Why is the respondent here today?

   (check all that apply)

   ☐ Personal need

   ☐ Child needs

   ☐ Passing through

   ☐ Other. Please describe:

   _____

   _____

2. How safe[55] does the respondent feel in this place?

   (Choose one that applies)

   ☐ Safe

   ☐ Neutral

   ☐ Unsafe

3. Generally, how often does the respondent visit this place?

   (Choose one that applies)

   ☐ Less than once a week

   ☐ Once a week

   ☐ More than once a week

4. Who has accompanied the respondent on this trip today?

   (Check all that apply. Write the number of people in each category. Include the respondent.)

   ☐ no one

   ☐ Babies (0-1 Year)

   ☐ Toddlers (1-3 Years)

   ☐ Young children (3-6 Years)

   ☐ Older children (7-10 Years)

   ☐ Teen (10-14 Years)

   ☐ Teen (15-19 Years)

   ☐ Parent/s

   ☐ Friend/s

   ☐ Caregiver/s

   ☐ Other family members: _____

---

55 Well-Lit, enable interaction, clean, supporting activities for caretaking

5. Is anyone in the group a PwD?

   (Check all that apply. Write the number of people in each category and type of Disability. Include the respondent.)

   ☐ no one

   ☐ Babies (0-1 Year)

   ☐ Toddlers (1-3 Years)

   ☐ Young children (3-6 Years)

   ☐ Older children (7-10 Years)

   ☐ Teen (10-14 Years)

   ☐ Teen (15-19 Years)

   ☐ Parent/s

   ☐ Friend/s

   ☐ Caregiver/s

   ☐ Other family members: _____

6. Does this area fall in the route of daily trips (Daily routes used to work place, shopping and home) of the Respondent?

   ☐ Yes

   ☐ No

7. Is this place close to local amenities such as milk booth, grocery store, vegetable market, etc.?

   ☐ Yes

   ☐ No

8. Is this place clearly separated from vehicular traffic and noise?

   ☐ Yes

   ☐ No

9. How long does the respondent plan to stay at this place today?

   ☐ Less than 5 minutes

   ☐ 5- 10 minutes

   ☐ 10 - 30 minutes

   ☐ More than 30 minutes

10. Have the respondent or the young children, he/she/they are here with met or interacted with anyone new here?

    ☐ Yes

    ☐ No

    ☐ Not sure/ we just got here

11. What is the likelihood that respondent will interact with others with whom they did not come here with?

    ☐ Absolutely

    ☐ Neutral

    ☐ Not at all

12. How did the respondent get here today?

(Check all that fits)

☐ Walk

☐ Cycle

☐ 2-Wheeler

☐ 4- Wheeler

☐ Public Transportation

☐ Taxi/Rideshare

☐ Other. Please write: _____

13. Is it easy to move[56] around in this place with a young child?

☐ Absolutely

☐ Neutral

☐ Not at all

14. Are there ITC friendly signages to make place more accessible?

☐ Yes

☐ No

☐ Not enough

15. Is there sufficient lighting in the area to avoid dark spots?

☐ Yes

☐ No

☐ Not enough

16. How does the respondent rate the journey to this place with their young children in terms of safety?

☐ 1: Extremely unsafe

☐ 2: Unsafe

☐ 3: Neutral

☐ 4: Safe

☐ 5: Extremely safe

Describe the reason for the rating: _____

17. How does the respondent rate the place in terms of cleanliness?

☐ 1: Poor

☐ 2: Satisfactory

☐ 3: Good

☐ 4: Very Good

☐ 5: Excellent

Describe what needs to be improved (if applicable): _____

---

56 Easy to move implies efficient lighting, signages, accessible infrastructure and clean environment. As an ideal we should aim that these spaces allow children to access space on their own.

# C. Open Spaces (Tot Lots, Housing Area Parks, Neighbourhood parks, City parks, etc.)[57]

## C.1 Questions for Institution and Service Providers

1. What is the size of the place?

   _____ (in square meters)

2. What facilities for young children and caregivers are provided by the service provider at this place? (choose all that are applicable)

   ☐ Functional Gender based Toilets for Caregivers

   ☐ Functional Gender based Toilets for Young Children (Up to age of six)

   ☐ Functional Caretaking facilities[58], Specify _____

   ☐ Interactive Walls (Murals, coloured walls, etc.)

   ☐ Functional Play equipment[59] for young children, specify _____

   ☐ Seating Arrangement

   ☐ Shaded Pathways

   ☐ PwD inclusive infrastructure[60], Specify _____

   ☐ Others, Specify _____

3. How often is this place cleaned? (choose all that are applicable)

   ☐ Daily

   ☐ Weekly

   ☐ Others, Specify _____

4. What is the staffing available in this place?

   ☐ Cleaning Staff, Number _____

5. What are the operation timings of this place? (For Example: 07:00 AM to 05:00 PM)

   _____

6. Does the place charge entry fee from its users?

   ☐ Yes. If yes, Provide entry fee _____

   ☐ No (Free)

7. Does the area facilitate stay of young children throughout the day?

   ☐ Yes

   ☐ No

---

57 Section G-3, (PART 3 Development Control Rules and General Building Reuirements - National Building Code, 2005, p. 61) ; Section 8.4.5, (URDPFI Guidelines, 2014, pp. 362,363,364)

58 Lactation room, Diaper change room, etc.

59 sand pits, telephone pipes, drums, spinners, swings, slides, Wheel chair Accessible Spinner, etc. ((Draft) Creating accessible parks and play spaces- A how to guide for Indian cities, p. 41 & 57)

60 Sensory elements, tactile tiles, Wheel chairs, Signages,  (Harmonised guidelines & Standards for Universal Accessibility in India -Draft, 2021, p. 202)

## C.2 Questions for Caregivers with Young Children

8. Is it clear that this is a play area or that it was okay to play here? (if applicable)

   ☐ Yes

   ☐ No

9. Why did the respondent choose this area for their children and visit?

   (Choose all that apply)

   ☐ Quality of the facilities at park

   ☐ Proximity to Home (5-15-minute walking range)

   ☐ Proximity to Workplace (5-15-minute walking range)

   ☐ Lack of other options

   ☐ Any other reason, Specify_____

10. What does the respondent like about this place?

    Please write:

11. Does this place offer comfortable and friendly infrastructure for the caregivers' needs (Walkways, Exercise equipment, etc.)?

    ☐ Yes

    ☐ No

12. Is this place comfortable for the respondent as a caregiver?

    ☐ Yes

    ☐ No

13. Is this a place for short or long stops? (Kindly specify the reason for choice)

    Please write:

14. How would the respondent rate the landscaping available for their group (Respondent & children)? (Trees, shrubs, material of walking track if any, etc.)

    ☐ 1: Poor

    ☐ 2: Satisfactory

    ☐ 3: Good

    ☐ 4: Very Good

    ☐ 5: Excellent

15. How would the respondent rate the seating infrastructure available for their group (Respondent & children)? (In terms of Shading, height and material of the infrastructure)

    ☐ 1: Poor: Infrastructure not usable

    ☐ 2: Satisfactory: Infrastructure suitable for short time

    ☐ 3: Good: Infrastructure sufficient to sit and take care of the child/children

    ☐ 4: Very Good: Infrastructure sufficient for interaction with child/children

    ☐ 5: Excellent: Infrastructure sufficient for interaction with child/children and is accessible by them without caregiver's help

16. How would the respondent rate the play infrastructure [61] available for the children (Respondent & children)? (In terms of Colours, textures, height and material of the infrastructure)

☐ 1: Poor, no infrastructure for children under the age of 6

☐ 2: Satisfactory, common play infrastructure for all ages can be used by children under the age of 6 in presence of caregiver

☐ 3: Good Interaction, Specific infrastructure is available for children under age of 6 and can be used in presence of caregiver

☐ 4: Very Good, Specific infrastructure is available for children under age of 6 and can be used with passive supervision of caregiver

☐ 5: Excellent Specific infrastructure is available for children under age of 6 and can be used with passive supervision of caregiver and also interact with other caregiver(s)

17. Can the respondent interact with the child/children when they are using the play infrastructure available for the children (Respondent & children)? (In terms of Visibility, height and material of the infrastructure)

☐ 1: Poor Interaction, Respondent feels unsafe to leave the child/children alone in play area

☐ 2: Satisfactory Interaction, Respondent may leave the child/children alone in play area

☐ 3: Good Interaction, Respondent child/children can play alone in play area

☐ 4: Very Good, Interaction, Respondent can communicate when the child/children is/are playing alone in play area

☐ 5: Excellent Respondent can communicate when the child/children is/are playing alone in play area and also interact with other caregiver(s)

18. How would the respondent rate the care-taking infrastructure available (Lactation Room /Diaper Change Room/Bathroom, etc.)? – If applicable

☐ 1: Poor

☐ 2: Satisfactory

☐ 3: Good

☐ 4: Very Good

☐ 5: Excellent

19. How would the respondent rate the lighting available for their group (Respondent & children)?

☐ 1: Poor: Insufficient lighting, hence area becomes unusable after dark

☐ 2: Satisfactory: Some areas are well-lit, however area may be unsafe after dark

☐ 3: Good: Lighting is available and may be used after dark with constant caregiver supervision

☐ 4: Very Good: Lighting is available and may be used after dark with periodic caregiver supervision

☐ 5: Excellent: Lighting is available and may be used after dark without constant caregiver supervision

---

61 sand pits, telephone pipes, drums, spinners, swings, slides etc.

20. If the respondent is a PwD, or is accompanied by a PwD does the respondent feel in terms of safety? (Kindly state the reason for the rating)

☐ 1: Extremely unsafe

☐ 2: Unsafe

☐ 3: Neutral

☐ 4: Safe

☐ 5: Extremely safe

Describe the reason: _____

21. If the respondent is a female/other, does the respondent feel in terms of safety during night? (Kindly state the reason for the rating)

☐ 1: Extremely unsafe

☐ 2: Unsafe

☐ 3: Neutral

☐ 4: Safe

☐ 5: Extremely safe

Describe the reason: _____

22. How would the respondent describe what a perfect open space (park, tot lot etc.) would be like?

_____

23. What are the top three improvements the respondent would like to see in this space in the near future that will encourage use?

☐ Shaded Area and Landscaping

☐ Lighting

☐ Seating Infrastructure

☐ Cleanliness of the space

☐ Toilets

☐ Others, Specify _____

# D. Educational Institutions: (Pre-Primary Schools, Nursery, AWC, etc.)

**D.1 Questions for Institution and Service Providers[62]:**

1. Type of Educational Institution
   - ☐ Pre-Primary School
   - ☐ Nursery
   - ☐ AWC[63]
   - ☐ Others, Specify _____

2. Ownership of the institution
   - ☐ Government
   - ☐ Private
   - ☐ NGO

3. What is the size of the institution?

   _____ (in square meters)

4. What age students does this institution enrol?
   - ☐ 1-3 Years
   - ☐ 3-6 Years
   - ☐ Both age groups

5. How many students are enrolled in the institution?
   - ☐ 1-3 Years _____
   - ☐ 3-6 Years _____

6. Does the institution cater to children with special needs[64]?
   - ☐ Yes
   - ☐ No

7. Does the institution charge fees from enrolling students?
   - ☐ Yes. If yes, Provide approximate annual fee per student _____
   - ☐ No (Free Education)

8. Does the institution have adequate staffing available? (choose all that are applicable)
   - ☐ Cleaning Staff, Number    _____
   - ☐ Care-taking Staff [65] , Number _____

---

62 (National ECCE Policy, 2013, p. 14)

63 http://icds-wcd.nic.in/icds.aspx#

64 (URDPFI Guidelines, 2014, p. 357) specifies 1 school per 45,000 population for physically challenged and 1 in 10 lakhs for 10,00,000 population.

65 (National ECCE Policy, 2013, p. 14)  specifies an Adult/caregiver to children ratio of 1:20 for 3-6 year olds and 1:10 for under 3 year olds

9.  Does this institution have an outdoor play area with age appropriate play equipment (safe, low height and without sharp edges) within the premises?

☐   Yes

If Yes, specify _____

☐   No

10. Does the daily school routine for children include playtime?

☐   Yes

If yes, specify: within school premises or public spaces

☐   No

11. Does the institution have young child-friendly infrastructure66 (such as sleeping mats, low height chairs, play equipment, toys, teaching aids, classrooms, etc.)?

☐   Yes

If yes specify: _____

☐   No

12. Does the institution provide functional gender based toilets for young children?

☐   Yes

☐   No

13. Does the institution offer nutritious food[67] for the children?

☐   Free meals under Mid-Day Meal scheme

☐   Paid meals available based on requirement

☐   Not Provided

14. Does the institution allow children to use the play spaces (if available) after school hours?

☐   Yes

☐   No

☐   Not Available

15. Does the institution provide pick-up and drop facilities for young children?

☐   Yes

☐   No

16. If Yes, what are the areas covered by the transport system?

☐   0-2 km Radius

☐   2-5 km Radius

☐   Any others specify _____

17. Does the institution have fire safety mechanisms in place?

☐   Yes

&#9633;    No

18. How often is this place cleaned? (choose all that are applicable)

&#9633;    Daily

&#9633;    Weekly

&#9633;    Others, Specify _____

19. Does the institution provide services for caregivers? (choose all that are applicable)

&#9633;    Functional Gender based Toilets for Caregivers

&#9633;    Functional Caretaking facilities[68], Specify _____

&#9633;    Seating Arrangement for Caregivers, Specify _____

&#9633;    PwD inclusive infrastructure[69], Specify _____

&#9633;    Others, Specify _____

20. Does the area facilitate stay of young children throughout the day?

&#9633;    Yes

&#9633;    No

## D.2 Questions for caregivers of the child/children:

1. Why did the respondent choose this institution for the children?

   (Choose all that apply)

   &#9633;    Quality of services at the institution

   &#9633;    Proximity to Home (5-15-minute walking range)

   &#9633;    Proximity to Workplace (5-15-minute walking range)

   &#9633;    Affordability

   &#9633;    Lack of other options

   &#9633;    Any other reason, Specify_____

2. How would the respondent rate the teaching infrastructure available for young children at the institution?

   &#9633;    1-3: Poor

   &#9633;    4,5: Satisfactory

   &#9633;    6,7: Good

   &#9633;    8,9: Very Good

   &#9633;    10: Excellent

---

68 *Lactation room, Diaper change room, etc.*

69 *Sensory elements, tactile tiles, Wheel chairs, PwD friendly parking, etc. (Harmonised guidelines & Standards for Universal Accessibility in India -Draft, 2021, p. 202)*

3. How would the respondent rate the play equipment (if available) for young children at the institution?

   ☐ 1: Poor

   ☐ 2: Satisfactory

   ☐ 3: Good

   ☐ 4: Very Good

   ☐ 5: Excellent

4. How would the respondent rate the toilet infrastructure (if available) for young children at the institution?

   ☐ 1: Poor

   ☐ 2: Satisfactory

   ☐ 3: Good

   ☐ 4: Very Good

   ☐ 5: Excellent

5. How would the respondent rate the food provided (if available) at the institution for the young children?

   ☐ 1: Poor

   ☐ 2: Satisfactory

   ☐ 3: Good

   ☐ 4: Very Good

   ☐ 5: Excellent

6. How would the respondent rate the infrastructure (if available) for caregiver at the institution? (toilets, caretaking facility, seating, others)

   ☐ 1: Poor

   ☐ 2: Satisfactory

   ☐ 3: Good

   ☐ 4: Very Good

   ☐ 5: Excellent

7. Can the respondent interact with other caregivers while waiting for the child/children?

   ☐ Yes

   ☐ No

# E. Health Care Institutions: (Dispensary, PHC, child welfare and maternity centre, etc.) [70]

**E.1 Questions for Institution and Service Providers**

1. Type of Facility[71]

   ☐ Dispensary/PHC

   ☐ Nursing home, child welfare and maternity centre

   ☐ Family Welfare Centre

   ☐ Hospital

   ☐ Others, Specify _____

2. Ownership of the facility

   ☐ Government

   ☐ Private

3. Time of operation of the facility

   Please write: _____

4. Does the institution charge fees from its users?

   ☐ Yes. If yes, Provide approximate consultation fee per visit_____

   ☐ No (Free Services)

5. Does the institution have functional gender based separate washrooms for young children?

   ☐ Yes

   ☐ No

6. Does the institution have interactive waiting area for children with appropriate play equipment (safe, low height and without sharp edges, etc.)?

   ☐ Yes

   ☐ No

7. Does the institution provide services caregivers? (choose all that are applicable)

   ☐ Functional Gender based Toilets for Caregivers

   ☐ Functional Caretaking facilities[72], Specify _____

   ☐ Seating Arrangement for Caregivers, Specify _____

   ☐ PwD inclusive infrastructure[73], Specify _____

   ☐ Landscaping[74]

   ☐ Others, Specify _____

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70 (URDPFI Guidelines, 2014, p. 360)

71 (URDPFI Guidelines, 2014, p. 360)

72 Lactation room, Diaper change room, etc.

73 Sensory elements, tactile tiles, Wheel chairs, PwD friendly parking, etc. (Harmonised guidelines & Standards for Universal Accessibility in India -Draft, 2021, p. 202)

74 Landscaping is comprised of two parts: softscape and hardscape. Softscape includes the design and planning of plants and trees and their locations. Hardscape includes the design and planning of pathways, pavements, fences and other civil work. (Creating accessible parks and play spaces- A how to guide for Indian cities, p. 25)

8.  Does the area facilitate stay of young children throughout the day?

    ☐  Yes

    ☐  No

## E.2 Questions for caregivers of the child/children:

1.  Purpose of Visit

    ☐  Regular Check-up/ Vaccinations

    ☐  Health Issue of the Child/Children

    ☐  Health Issue of the Caretaker (Please specify the relation with Child/Children)

2.  Why did the respondent choose this facility for the visit?

    (Choose all that apply)

    ☐  Quality of services at the facility

    ☐  Proximity to Home (5-15-minute walking range)

    ☐  Proximity to Workplace (5-15-minute walking range)

    ☐  Affordability

    ☐  Lack of other options

    ☐  Any other reason, Specify_____

3.  How does the respondent rate the seating/waiting infrastructure for caregiver at facility?

    ☐  1: Poor

    ☐  2: Satisfactory

    ☐  3: Good

    ☐  4: Very Good

    ☐  5: Excellent

4.  Can the respondent interact with other caregivers while waiting for the child/children?

    ☐  Yes

    ☐  No

5.  How would the respondent rate the care-taking infrastructure available at the facility (Breast Feeding Room/Diaper Change Room/Bathroom, etc.)? – If applicable

    ☐  1: Poor

    ☐  2: Satisfactory

    ☐  3: Good

    ☐  4: Very Good

    ☐  5: Excellent

6.  Has the respondent seen any ECD related messages (messages related to ensuring the health, nutrition, responsive caregiving or safety of young children) in or around the institution?

    ☐  Yes

    ☐  No

7. What type of ECD related messages (messages related to ensuring the health, nutrition, responsive caregiving or safety of young children) did the respondent see in or around the institution?

☐ Related to child growth/developmental milestones

☐ Child nutrition

☐ Immunization

☐ Other, please specify _____

# F. Streets

## F.1 Questions for Institution and Service Providers

8. Right of Way[75] of the street:


9. What facilities for young children and caregivers are provided by the service provider at this place? (choose all that are applicable)

☐ Signalised Intersection

☐ Footpaths

☐ Seating Arrangement

☐ Functional Street Lights

☐ Interactive Walls (Murals, Bala Paintings coloured walls, etc.)

☐ Landscaping[76]

☐ Traffic Safety Measures[77], specify _____

☐ Inclusive Elements[78]

10. How often is this place cleaned? (choose all that are applicable)

☐ Daily

☐ Weekly

☐ Others, Specify _____

11. Type of Urban Street[79]

☐ Arterial

☐ Sub-Arterial

☐ Collector

☐ Local

## F.2 Questions for caregivers of the child/children

12. Purpose of Visit

☐ Work

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75 Right of way is the space between two property lines, reserved in any legal development plan/planning document/spatial plan for the movement of all transport modes.

76 Landscaping is comprised of two parts: softscape and hardscape. Softscape includes the design and planning of plants and trees and their locations. Hardscape includes the design and planning of pathways, pavements, fences and other civil work. (Creating accessible parks and play spaces- A how to guide for Indian cities, p. 25)

77 Speed Tables, Raised Crossings, Raised Intersections, Guarded Pedestrian Railings, Zebra Crossing (Indian Road Congress)

78 Kerb ramps, Tactile Tiles, Signages with braille, Controlled Intersections  (Indian Road Congress)

79 (Geometric Design Standards for Urban Roads in Plains, 1983, p. 2)

- ☐ Education
- ☐ Shopping for daily needs
- ☐ Exercise
- ☐ Recreation (Closed streets for NMT, Food Streets, etc.)
- ☐ Any other specify _____

13. Time of visit

    Please write:

14. How does the respondent rate the street for child safety?
    - ☐ Poor
    - ☐ Satisfactory
    - ☐ Good
    - ☐ Very Good
    - ☐ Excellent

15. Does the street have shaded seating and walking infrastructure for caregiver and the child/children?
    - ☐ Yes
    - ☐ No

16. If yes, how does the respondent rate the seating and walking infrastructure for caregiver and the child/children?
    - ☐ Poor
    - ☐ Satisfactory
    - ☐ Good
    - ☐ Very Good
    - ☐ Excellent

17. Does the respondent feel the street is interactive for the child/children to explore?
    - ☐ Yes
    - ☐ No

18. If the respondent is a PwD, or is accompanied by a PwD does the respondent feel the street infrastructure is suited to their needs? (Examples: Clear edge marking of street, different texture of street and footpath, Vocal announcements at intersections, Poles or signage's enabled for visual disability, etc.)
    - ☐ Yes
    - ☐ No

19. If the respondent is a PwD, or is accompanied by a PwD does the respondent feel in terms of safety?
    - ☐ 1: Extremely unsafe
    - ☐ 2: Unsafe
    - ☐ 3: Neutral
    - ☐ 4: Safe
    - ☐ 5: Extremely safe

    Describe the reason: _____

## Tactical Urbanism – A solution to Community needs

Tactical Urbanism accommodates play and interaction in public places at lower cost in short time duration. The integrated nature of people-centric solutions encourages the involvement of the targeted population to realise their needs and reorganize available space to create memorable landscapes. Tactical interventions are flexible in nature, context and utilizes low cost materials.

Toolkit proposes tactical urbanism as a strong tool for community engagement. Tactical Urbanism gives the flexibility of coming up with infinite ideas and the means to execute the same. Small scale interventions can be explored with low cost material to produce temporary spaces through volunteering initiatives. Involvement of local community in design and implementation of tactical intervention can generate support for scaling-up and ensures that the intervention is well maintained by local community members.

Furthermore, under-utilized spaces in the neighbourhood such as abandoned areas, underpasses, etc. can be reclaimed to infuse them with small scale focused interventions for young children and caregivers. Street section profile can be modified to incorporate play spaces for young children and rest stops for care givers. Tactical interventions offer the flexibility to arrange pop-up events, multi –use spaces and voluntary community engagement. Some examples of tactical urbanism -

- Open streets are temporary closed for traffic, pedestrialized and turned into enclosures for community activities. Numerous cities globally, including Indian cities, are frequently arranging open streets. Temporary closures free up space for children to play and encourage social interaction between caregivers.

  Raahgiri Day in Gurugram and New Delhi, launched in 2013, is one successful example of open street.

- In Pune, play areas with rubberized soft flooring have been designed at regular intervals between the green buffers.  Small scale interventions like this can be readily adopted to create young child friendly neighbourhoods.

8.

# 8. Data Cleaning and Consolidation

Mere collection and assimilation of data is not enough, it needs to be cleaned and consolidated for ease of use by city authorities and other stakeholders.

Data acquired from government agencies and other sources is in a raw form and is not available in the desired format. Data cleaning involves removing irrelevant or incorrect data and structuring necessary data in a particular form that can be used for analysis. Data consolidation involves integration of data from multiple sources. This helps to improve the quality of analysis.

## Points to consider during data consolidation as follow:

1. **Disaggregation:** Database on children, from various sources, consider children as a homogenous group and the data are not provided for various sub-groups. The data need to be disaggregated for the sub-groups - infants, toddlers, young children, and tabulated by children with various types of disabilities, gender, geographical location, economic and socio-cultural segments, among others. The homogenous database on children does not provide an in-depth understanding of young children and their caregivers. Thus, when cities are developing the data base on children, the data needs to be classified by age groups 0 – 1 years, 1 - 3 years and 3-6 years with their caregivers respectively. These age specific data would enable cities to set tangible targets.

2. **Granularity:** Granularity implies the detail up to which data is collected. The indicators also specify the granularity of data. The level of detail can be regulated when indicators are being identified for data collection. The purpose of the data is to provide evidence for policy decisions and inputs for the design of programmes and built environment investments. It is, thus, important to define the granularity of the data.

3. **Standardized terms and definitions:** If there are disparities in definitions of indicators and data points, the data analysis results can be inconsistent. Standardized terms and definitions that are comparable to international standards should be used. Data standardization is an important step in data consolidation. Data for one variable, for example, may be available for the age group of 0-5 years from one source and 0-6 years or 4 - 9 years in other sources.

4. **Time frame:** Data for different variables may be available for varying time periods. For example, Census data are released every ten years while NSSO has multiple rounds of data collection. The most updated data source should be used during consolidation. If a comparison or correlation is conducted between two datasets, these should relate to the same time period.

5. **Validation/Authentication:** Data validation is to ensure data cleansing and to check the accuracy of data. This may be done through simple cross referencing or by advanced methods, a data type or structured check.

6. **Removing Repetitions and Inconsistencies:** Any repetitions in data and inconsistencies should be checked and removed during the validation and cleaning exercise. Repetitions like double counting and inconsistencies like missing data for a year can give incorrect results.

## The methods of data cleaning are the following:

1. **Removing Irrelevant Values:** The data set obtained will have various variables which are irrelevant for the ITCN assessment and promotion. These rows, columns and cells should be removed from the data tables that are being used so that the values remaining in the data tables represent the indicators that are relevant to the assessment. For example, Census tables on demographics include several indicators like population, male/female population, rural/urban population, sex ratio, etc. From this database, only the relevant variables should be kept and the rest should be removed.

2. **Check for duplicity:** It is important to go through the data tables meticulously and check if the data have any duplicate values. Any repeated value should be deleted immediately. Duplicity of data gives inaccurate results.

3. **Check and standardize spellings used:** For easier and quicker data analysis through statistical software, it is important to ensure that the spellings or values used to denote them are standardized and correct. The names given to indicators in data tables should also be checked for spelling mistakes and standardized to avoid any fault in analysis due to negligence. For example, Some of the data is recorded in binary values, like the responses "Yes/No".

4. **Check Missing Values:** Some values may be missing in data tables either due to an error in data entry or because the value is not available. In case of an error, the missing value should be filled up. In case the data is not available the data should be obtained or different methods should be used to fill the missing data - for example, in time series data, if data are unavailable for a year, methods of data-fitting may be used to fill the missing values.

Photograph by: Khushboo Jain

# 9. Data Analysis and Visualisation

Data analysis and visualization are important to inform the decision making process about the needs and gaps in ITC-related infrastructure provisions. The various steps in carrying out data analysis are as shown in Figure 9. In addition, ITCN capacity building programme intends to develop a city dashboard for data visualization.

The type of analysis to be used is co-related to the database developed. The indicators identified in the Section 7 predominantly provide two types of datasets:

1. Quantitative Datasets
2. Qualitative Datasets

**Figure 9: Steps in Data Analysis**

**Vision for the City**

Setting vision for an ITC friendly city through consultations with ITCs, service providers, elected representatives, CSO's and CBOs, ECD Experts and other relevant stakeholders

**Set Benchmarks for Service provision**

Choose Indicators relevant to the city's context and needs and set benchmarks.

**Assessment of Services**

Collect Relevant Data against the indicators and compare with the set benchmarks and create a data baseline

**Identification of gaps in service provision**

Identify areas that need improvement and set specific targets with timelines

**Evaluation and Monitoring**

Monitor progress in terms of activities conducted against vision and benchmarks. Evaluate what could be done better

# | 9.1  Quantitative Data Analysis

Quantitative database has numeric values which are easily comparable to the established benchmarks and the gaps can be easily analysed. Indicators on socio-economic aspects and built environment indicators predominantly come under this category. The suggested method of analysis for quantitative data is Gap Analysis which uses a side-by-side matrix to depict quantitative data that helps measure the difference between expected performance and actual performance. 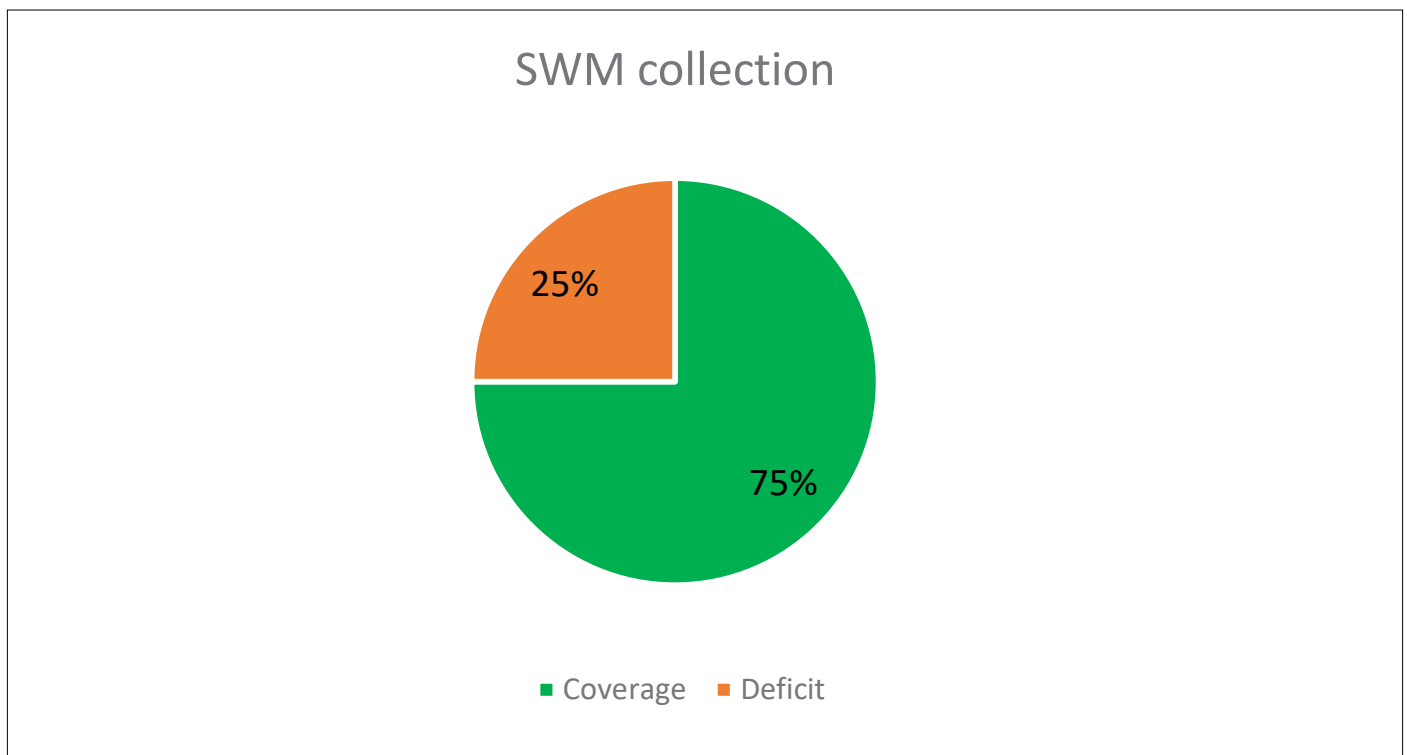Such data analysis helps measure gaps in performance and the things that are required to be done to bridge this gap.[80] To assess a city's performance and identify the areas where the city lacks, the data collected must be compared with a set of benchmarks. Benchmarking is important for urban local bodies to understand where they can be doing better and how they can improve. These benchmarks can be global or national standards or these may be defined by a city/ community in the local context. Setting customized benchmarks requires the city to set a vision of being ITC-friendly, endorsed by the elected and executive wing of the urban local body. Wide-ranging consultations with ECD experts, urban planners, academicians and other stakeholders are then needed for setting achievable targets and benchmarks in line with the vision. These benchmarks can then be used for periodic monitoring and evaluation, performance management and modification of urban policies as well as interventions to improve urban environment and service delivery.

If the contextual indicators are chosen as per citizen's desires (in this case young children and families), this system can also help the cities in defining a long term vision of improvement and roadmap to achieve it. The following example demonstrates this:

Example: City A has a population of 2,00,000 and has an SWM collection facility with 75% efficiency in the neighbourhood. The SLB for SWM collection as identified in Indicators for rapid assessment Indicator No.22 is 100%. A Bar Graph or a Pie Chart can be used to depict the deficit in provision of this service as shown in  Figure 10 and Figure 11.

**Figure 10: Example of Data Visualisation - Pie Chart**



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*80 https://www.questionpro.com/blog/quantitative-data/*
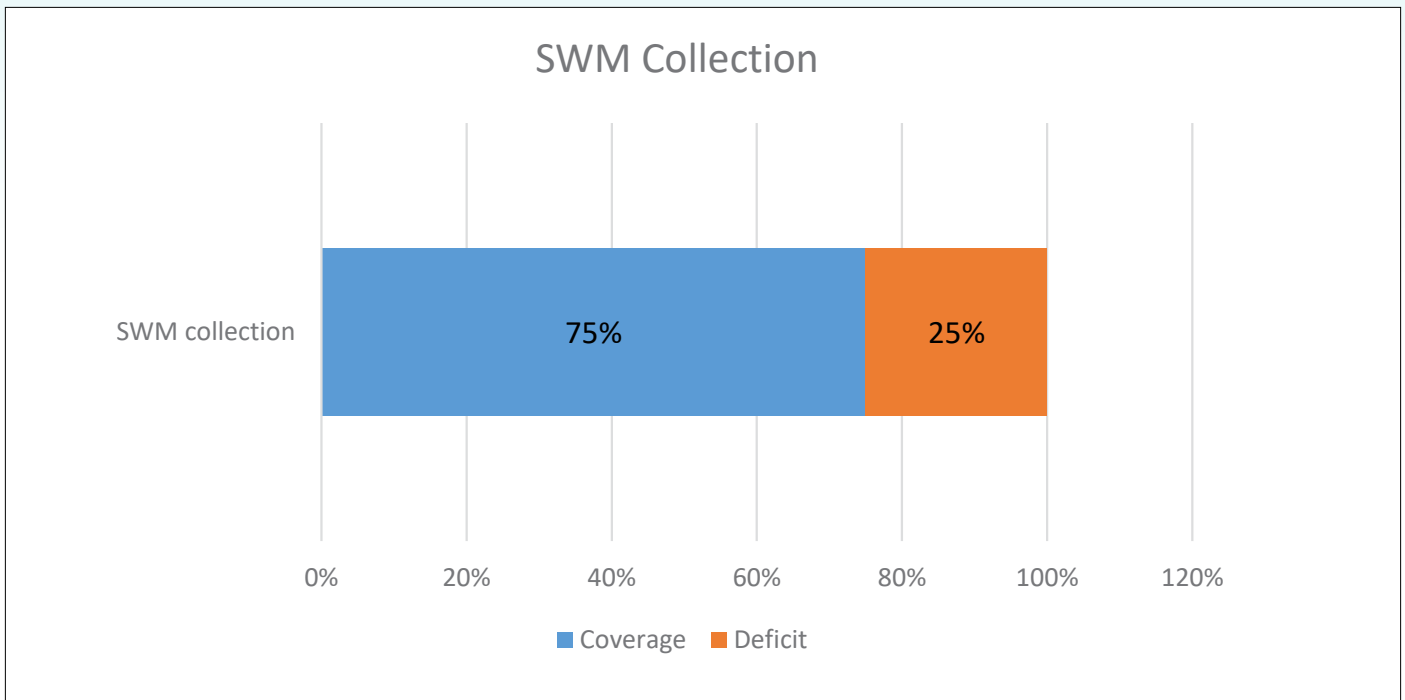
Visualisation of quantitative datasets is useful in simplifying the data analysis and provides an impetus for taking the necessary steps. Furthermore, based on this analysis, cities can set realistic targets. These can be monitored and progress tracking can be done easily by using updated real time data.

# 9.2 Qualitative Data Analysis

He qualitative indicators are not numeric values but are based on observations and recordings. These data sets cannot be directly analysed and require an in-depth understanding of the indicator at hand. Datasets on perception of safety and policy are good examples. Data on lack of policy, inadequate number of personnel, etc. may be used for qualitative analysis and setting the targets.

**For Example:**
The concept of safety is intangible, is perception based and is influenced by various factors. Though perceptions can be quantified and represented as a pie chart to depict the on-ground situation, it does not provide tangible targets to feed into the city planning. Thus, cities may use a set of proxy indicators to substantiate the above finding. In this example, cities may use proxy indicators for safety such as adequacy of street lighting, availability of CCTV, crime rate in the area and availability of mixed use within 15-minute radius (refer to Annexure Table 8). These questions by themselves can be binary questions or absolute values, but they can together be quantified through diagrams to analyse the neighbourhood.

After carrying an in-depth assessment in a city, if the city finds absolute values for each of these indicators and are compared with benchmark values, then perception of safety can be changed.

Alternatively, cities may use a weightage based analysis where each of these parameters can be given a certain weightage with respect to their priority, fund availability and other parameters. Assigning weights depicts the relative significance of the indicators. A value is assigned to each indicator based on its impact on the target age group or its importance in a set of priorities targeted by the city. The value of the weight indicates its suitability and impact on the final objective. The weightage criteria can also be aligned to the needs of the caregivers and the community by involving them in the rating process of the indicators. Word cloud creation through some of the key emerging perceptions could add value to dive into the target audience's needs and realities.

*Photograph by: Ravichandra GS*

# 10. Using Data for Informed Outcomes

The toolkit elaborates the use of the assimilated data and how it can help in achieving the expected outcomes. The expected outcomes have been described in Section 4. This section on Using Data for Informed Outcomes explains methods to use the collected data to help achieve the purpose of the project.

Data driven decision making is a tool frequently used by companies to test their products. Similarly, it is also used by governments to make policies and implement programmes. Having data repositories based on ITC indicators brings the ITC needs into focus and helps in integrating them as stakeholders under planning, development and governance of the city. The data collected for developing the indicators will help the local authority to understand how the built environment impacts a family that includes young children and their caregivers. The data provide evidence on the existing conditions and gaps in infrastructure and service provision for ITC. This evidence should be used to make informed policy decisions, strategies and plans, sensitize municipal staff and elected representatives as well as citizens for an effective development response to the needs of ITC.

The toolkit will be used to answer questions like:

1. How is the city addressing the 'live, play and learn' needs of young children and families?
2. What are the places frequented by children and their families on the scale of cities as well as neighbourhoods?
3. How are young children using these spaces? (Behavioural Aspects)
4. How does the planning and design of these spaces contribute to their quality of life and development?
5. Where are they walking, sitting and playing?
6. What are the existing gaps in the built environment for ITC?
7. What should be the immediate priorities of the city for ITC?
8. What should be the mandate of the government?

## Informed Decision Making
ITC database helps in identifying location and the scope of intervention.

# 10.1 Master Plans

City-level data collected for children and their families, and the infrastructure and services accessed by them can be used for mainstreaming their needs in infrastructure planning. The gaps in the existing infrastructure are highlighted when backed by data and may be addressed in the Master Plan.

### Characteristics and Use of Data in the case of Master Plan of Delhi 2041

Using Quantitative Data on the population density for young children, sourced from the Census of India, and data on location of Aanganwadis (AWC), sourced from ICDS, a GIS based analysis was undertaken at the ward level in Delhi. It was observed that AWCs are sparsely distributed in fringe areas. 13,62,553 children are left out according to a report by NCPCR (2011). A qualitative data review also revealed that the quality of built environment in the AWC is not up to the mark. Based on this analysis, the key ITC recommendations in the Master Plan of Delhi are: child care services may be included amongst the mandatory social infrastructure in housing or neighbourhood areas; both population and distance should be used for micro planning; the needs of pregnant mothers and children with disabilities should be considered while designing and planning childcare facilities; and, provide childcare provisions in the design of rental housing for migrant families.

# 10.2 City Level Inventory of Services for Children and Families

Children related services include health, education, recreation and safety. These services, in the case of infants and toddlers, are also accessed by caregivers. An inventory of all these services and information on the service provider helps in accessing the information and using it to make policies and comprehensive plans for providing equal opportunities for all.

### Characteristics and Use of Data in the case of "Analysing and Mapping Services for Children and Family in Istanbul District Municipalities"

The Bernard van Leer Foundation, in collaboration with Turkish Economic and Social Studies Foundation, implemented the project "Analysing and Mapping Services for Children and Family in Istanbul District Municipalities", for making a comprehensive inventory of Social Services for children and families. Data were collected for the following services for children:

1. Service units: day-care centres and nurseries

2. Health units

3. Psychological counselling units

4. Other service units like children libraries, coordination centres for the children with disabilities, etc.

5. Green spaces

A survey of these services was undertaken for data collection by training municipal staff in 39 districts in Istanbul. An interactive website was designed to represent and understand these data, which were used by the municipalities to formulate data driven policies.

# 10.3 Data Driven Decision Support System

A data driven decision support system, including data collection, analysis and disseminate, to support key decisions on interventions to improve and efficiently manage urban areas. It is a very sophisticated and advanced system which also uses spatial mapping data analysis. It helps anticipate city problems, their geographical location and spread of the problems.

## Characteristics and Use of Data in the case of Integrated Spatial Decision Support System (ISDSS):

Bernard Van Leer Foundation, supported by NIUA, has developed an Integrated Spatial Decision Support System (ISDSS) which aims to analyse the levels of vulnerabilities faced by Delhi schools in the perspective of emergencies and the availability of basic services, environmental facilities etc.

**City Performance Score Cards**

City performance score cards are an effective performance management system for tracking and measuring the progress of the city across various parameters. This also encourages the different wards/ neighbourhoods to innovate and city authorities to incentivize the better performing units to foster a healthy competition and effectiveness.

## Characteristics and Use of Data in the case of San Francisco government:
The highlights of the San Francisco Performance Scorecards include 80 indicators in eight service areas: Liveability, Public Health, Safety Net, Public Safety, Transportation, Environment, Economy, and Finance. This helps cities make transparent, data driven decisions in policy development, helps them align programming with resources for greater efficiency and impact, and create and access the tools required for innovation.

# 10.4 Urban Observatories

Urban Observatories collect data over a greater geographical area integrating mapping and real time sensors to monitor certain parameters. As a result, they develop dynamic and real time dashboards that streamline complex data into easy to understand visual elements.

## Characteristics and Use of Data in the case of India Urban Observatory and Child Wellbeing Dashboard in Ontario:
The India Urban Observatory uses data relating to air quality, heat map, cleanliness score to calculate the real time safety index of a route. It is based on data on real-time status of streetlights, past crime records, presence of police stations and bus stops, among others. Such an observatory can help understand the safety aspects for the ITC population. The observatory is working on 10 core areas such as solid waste management, water, wastewater management, mobility, education, health, among others. If this is integrated with the data on ITC, it can help understand the problems unique to ITC and the amenities used by ITC.

The Child Wellbeing Dashboard in Ontario analyzes the neighbourhoods in the city. It shows the variations across different neighbourhoods within the city with respect to amenities and movement of children. Indicators on child well-being help understand the welfare of children. There are four indicators on the Dashboard: Fundamental Needs, Health, Learning and Relationships.

# 11. Incorporating Reforms

The intent of this toolkit is to help include ITC into city planning. This can only be sustained by bringing in policy to support and push forward the ITC agenda in the planning regime. Reforms play a key role in improving the accountability of the ULBs by simplifying the urban governance procedure and making them more transparent. Data availability, open access and monitoring facilitate are key to realizing these reforms.

The following examples from India CFSC[81] and Cities Alive Project[82] depict this:

## 11.1 JM road, Pune, India

In the wake of increasing levels of traffic and pollution in Pune, and also due to appalling driving habits and flawed road designs, the Pune Municipal Corporation undertook this project prioritising pedestrians and cyclists. The agency proposed to build a high quality footpath on JM Road, taking into account needs of all street users. It involves streamlining the haphazard parking, and reclaim space for the people, enabling a wider footpath and cycle track. The new design thus includes a continuous footpath, a separate cycle track and organised street parking. The design also integrates bus stops, street vendors and street furniture, locating them carefully such that they do not hinder the pedestrians.

## 11.2 Safe Road to Park and Schools, Visakhapatnam, India

The Vizag Non-Motorised Transport Plan, created under Sustainable Urban Transport Project (SUTP), recommends that Greater Vishakhapatnam Municipal corporation institutes a "Safe Route to Parks and Schools" programme in order to ensure that all school zones are safely accessible by walk. Traffic calming measures along the frequently travelled streets, within a 500m radius from activity areas used by children, should be installed at recommended intervals with appropriate enforcement. It identifies the social, institutional and recreational zones in the cities, earmarking them for priority intervention under the proposed "Safe Route to Schools" programme.

In both the examples cited above, though the interventions brought in by cities are very local and not cost

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*81 (ITCN BEST PRACTICES COMPENDIUM)*

*82 (Cities Alive - Designing for urban childhoods, 2017)*

intensive, both have been effective in making public spaces safe and inclusive for ITC. The approach taken by both the ULBs is to form a vision and bring reforms to enable the implementation of the projects.

# | 11.3 Bogotá Children's Priority Zone

In 2017, under Urban95 partnership with Bogotá and Bloomberg Associates, the concept of a 'children's priority zone' was rolled out as a pilot in one Bogotá neighbourhood. The premise was to implement a package of interventions across a defined geographic area, beginning with temporary activities to engage communities, before moving on to more permanent investment in infrastructure and human resources.

Establishing a children's priority zone started with finding an anchor institution such as childcare centre, playground or health clinic and defining a perimeter around it. Initial events were held to raise awareness and bring together the families in the community. Issues affecting children were researched, and solutions were proposed such as safer road crossings near schools or parks, the rehabilitation of abandoned space into a garden where families grow healthy food, the allocation of land for a health outpost to increase accessibility for families.

In Bogotá, choosing the location of the first children's priority zone involved a data-driven process led by partner Casa de la Infancia and involving multiple departments of the city government and other stakeholders. After mapping areas with greatest challenges for children, and opportunities for change presented by public interventions, a zone was chosen in the Acacia and San Luis Colmena neighbourhoods of San Francisco, in the district of Ciudad Bolívar. The zone, with a radius of around 200 metres, including two kindergartens, two schools, and an estimated 2,315 households. It was understood that there was a lack of public space or transport options configured for children. Hence, the team identified abandoned public spaces that could be renovated into places for children to play, and a network of pedestrian paths that could become safe routes for families to walk between homes, play spaces and local services.

The children's priority zone pilot project, called Crezco con mi barrio ('Growing with my neighbourhood'), held its first event in October: in collaboration with local authorities, a street was closed between 10 a.m. and 3 p.m. on a Sunday, a football tournament held, and other activities laid on for families. Young people painted a mural of early childhood games. Around 300 people of all ages participated in the day's events, with fathers and grandparents observed engaging with young children.

# | 11.4 Bicentennial Children's Park, Santiago, Chile[83]

Chile's main challenge is the huge inequalities between rich and poor, which has been causing increasing civic demands, social pressure and political tension. In the case of Santiago, despite the country's outstanding economic growth in the last decade, urban standards have not increased proportionally. In fact, Santiago has no single place for a long walk without being interrupted by a street or without having to share the space with cars.

The Children's Bicentennial Park, on the 600-hectare hill that is part of the Andes, despite its central location in the city, was hard to use due to its slope. The difficulty of the terrain, being on a hillside, was used to solve a classic dilemma of children's games: make them safe or make them fun. Every nook and cranny was designed to accommodates one feature or another: a small flat contains swings, a narrow pathway leads to the fort

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*83* (Children Bicentennial Park Santiago, Chile, 2012)

structures, which extend off the hillside so that they don't take up valuable land, and the fence that surrounds the park also serves as a unique jungle gym. The steep slope was also used to accumulate the necessary height to make the equipment fun without threatening security. The slope allowed was used to create very long slides that a young child could climb and would be 30 centimetres from the ground. The same was done with tree houses, where the slope was used to enable children to walk horizontally to the top of the tree instead of vertically climbing the tree trunk to the foliage.

The Children's Bicentennial Park was constructed to reduce the city's historic debt of public space: Santiago has an average of 4m$^2$ of green space per inhabitant as compared to World Health Organization (WHO) norm of 9 m2 per person. (London has 44 m2 per inhabitant of green space). So, in a city with a privileged weather, with mild winters and long warm dry summers, any investment in public space has a huge social pay back, because it guarantees democratic access to places where people can enjoy life.

# 12. Annexures

## |12.1 Additional Information for In-Depth Assessment

The following is an exhaustive list of data sources for In-depth Assessment. Data Analysis and Visualisation of this has been elaborated in Section IX. The Indicators identified can be collected annually by the interdisciplinary core team as outlined in the Section VI. The list of sources identified are only suggestive and may require further modifications based on the municipal structure in the respective cities as per the State Municipal Acts. The Benchmarks, where available have been identified based on existing guidelines, policies and laws. However, cities may choose to formulate their own vision and create benchmarks suited to them, where benchmarking is not available. Cities based on the rapid-assessment may choose one or more relevant thematic areas to carry out the in-depth assessment. These indicators have been majorly based on Infant, Toddler, Caregiver-Friendly Neighbourhood (ITCN) Framework and Guidelines, 2019, NIUA - ICHILD and ITCN EVALUATION & MONITORING METRICS, 2014. The links to these documents have been provided in the bibliography and cities may choose to further investigate based of these documents as well. The suggested periodicity of data collection for these data sets is Annual.

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| **Socio Economic** | | | | | | | |
| 1 | Population of Children below the age (0-6 Years) girls and boys separately | Number | | NA | TC | ULB/ Health Dept. | Secondary |
| 2 | Child Sex ratio (females/ 1,000 males) | Ratio | | 1,000 | TC | ULB | Secondary |
| 3 | Total literacy rate of City | % | | 100 (as per SDG goals) | TC | ULB | Secondary |
| 4 | Gender gap in literacy | % | | Zero | TC | ULB/ Education Dept. | Secondary |
| 5 | Number of Households | Number | | NA | ITC | ULB - Department of Town Planning | Secondary |
| 6 | Unit area per person in a dwelling unit | Number (metre square) | | · 15 sq. m. in Hong Kong · 20 sq. m. in China · 35 sq. m. in Japan | ITC | ULB - Housing Surveys | Primary |
| 7 | Average number of household members per dwelling unit household | Number | | As per census 2011, average size of household was 4.9 | ITC | ULB - Housing Surveys | Primary |
| 8 | Average number of household members per dwelling unit household in slums | Number | | NA<br><br>As per census 2011, average size of household was 4.7 | ITC | ULB - Housing Surveys | Primary |

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| 9 | Area per dwelling unit for low income housing | Number (metre square) | | NBC Benchmark · Min 40 m² in small and medium towns · Min 30 m² in metropolitan cities | ITC | ULB - Housing Surveys | Primary |
| | **Built Environment** | | | | | | |
| 10 | Number of night/ mobile shelters for women and/or children | Number | | NA | ITC | ULB - Department of Engineering | Secondary |
| 11 | No. of Dispensaries in the neighbourhood | Number | | Sec.8.4.3, (URDPFI Guidelines, 2014, 2015, p. 360) specify 1 per 15000 population | ITC | ULB- Public Health Department, Town Planning Department(GIS Map if available), | Secondary |
| 12 | No. of Nursing home, child welfare and maternity centre in the neighbourhood | Number | | Sec.8.4.3, (URDPFI Guidelines, 2014, 2015, p. 360) specify 1 per 45,000-2,00,000 population | ITC | ULB- Public Health Department, Town Planning Department(GIS Map if available), | Secondary |
| 13 | No. of Police Posts in neighbourhood | Number | | Sec.8.4.8, (URDPFI Guidelines, 2014, 2015, p. 366) specify 1 per 40,000 – 50,000 population (in areas not served by police stations) | ITC | District Police Department | Secondary |
| 14 | No. of Police Stations in neighbourhood | Number | | Sec.8.4.8, (URDPFI Guidelines, 2014, 2015, p. 366) specify 1 per 90,000 population | ITC | District Police Department | Secondary |
| 15 | No. of Sub fire station/ Fire Post in neighbourhood | Number | | Sec.8.4.9, (URDPFI Guidelines, 2014, 2015, p. 366) specify 1 within 3-4 km radius | | Fire Department | Secondary |
| 16 | % of households receiving water supply volume as per BIS norms | % | | 100% | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data & Housing Surveys (If reqd.) | Secondary |
| 17 | % of households with toilet facilities within housing premises | % | | Refer to IS1173:1993, Indian Standard Code Of Basic Requirements For Water Supply, Drainage And Sanitation | ITC | UL B - Department of Engineering - Ward / Sub-City Level Data ; Swachh City Plan (http://swachhbharaturban.gov.in/ToiletBlocks.aspx?id=qgj4xpr8fhyudo24) | Secondary |
| 18 | % of households with drainage (closed and open) | % | | Refer to IS1173:1993, Indian Standard Code Of Basic Requirements For Water Supply, Drainage And Sanitation | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data ; Swachh City Plan (http://swachhbharaturban.gov.in/ToiletBlocks.aspx?id=qgj4xpr8fhyudo24) | Secondary |
| 19 | % of households with bathroom as per the BIS norms | % | | Refer to IS1173:1993, Indian Standard Code Of Basic Requirements For Water Supply, Drainage And Sanitation | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data ; Swachh City Plan (http://swachhbharaturban.gov.in/ToiletBlocks.aspx?id=qgj4xpr8fhyudo24) | Secondary |
| 20 | % of households with water closet as per the BIS norms | % | | Refer to IS1173:1993, Indian Standard Code Of Basic Requirements For Water Supply, Drainage And Sanitation | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data ; Swachh City Plan (http://swachhbharaturban.gov.in/ToiletBlocks.aspx?id=qgj4xpr8fhyudo24) | Secondary |
| 21 | % of households with sinks as per the BIS norms | % | | Refer to IS1173:1993, Indian Standard Code Of Basic Requirements For Water Supply, Drainage And Sanitation | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data ; Swachh City Plan (http://swachhbharaturban.gov.in/ToiletBlocks.aspx?id=qgj4xpr8fhyudo24) | Secondary |

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| 22 | % of households connected with metered electricity - (No. of Metered Households/ Households in Neighbourhood) | % | | 100% | ITC | Electricity Department - Circle wise Data & ULB - Department of Town Planning | Secondary |
| 23 | Number of Tot lots | Number | | 3 - 4 local parks and play-grounds, (URDPFI Guide-lines, 2014, 2015, p. 362) | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data | Secondary |
| 24 | Number of good quality housing area park spaces in the neighbourhood (with shaded area, landscaped area, bright coloured equipment, com-fortable seating areas, cleanliness and safety) | Number | | 3 - 4 local parks and play-grounds, (URDPFI Guide-lines, 2014, 2015, p. 362) | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data | Secondary |
| 25 | Number of good quality neighbour-hood park spaces in the neighbourhood (with shaded area, landscaped area, bright clouded equipment, com-fortable seating areas, cleanliness and safety) | Number | | 3 -4 local parks and play-grounds, (URDPFI Guide-lines, 2014, 2015, p. 362) | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data | Secondary |
| 26 | % of Organised green open space in the neighbourhood | % | Area | According to the World Health Organization, at least 15% of a city's space should be under greens, (Urban Greening Guide-lines, 2014, 2014) | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data | Secondary |
| 27 | Per Capita organised green open space for a neighbourhood (Sum of Areas un-der Open Spaces / Total Population of Neighbourhood) | Sqm | PPH | 10-12 sqm per person, (URDPFI Guidelines, 2014, 2015, p. 362) | ITC | ULB - Department of Engineering & Department of Town Planning - Ward / Sub-City Level Data, | Secondary |
| 28 | % of Households within 300m distance of a green space above 125sqm | % | | Sec.8.4.10.2, (URDPFI Guidelines, 2014, 2015, p. 368) specify all public facilities should be located within a distance of 300m | ITC | Primary Survey by ULB , GIS based maps (If Available), List of Green Spaces may be obtained from ULB - Department of Engineering, Town Planning | Primary |
| 29 | % of Households within 300m dis-tance or 5 - 10 min walking distance of a public facilities like day care centres, pre-pri-mary and primary schools, primary health facilities, local markets | % | | Sec.8.4.10.2, (URDPFI Guidelines, 2014, 2015, p. 368) specify all public facilities should be located within a distance of 300m | ITC | Maps of Public Spaces - ULB - De-partment of Town Planning, Spatial Analysis, Primary Survey by ULB | Primary |
| 30 | No. of crèches with-in accessible 500m distance from housing cluster | Number | | Sec.8.4.10.2, (URDPFI Guidelines, 2014, 2015, p. 368) 2014 specify all public facilities should be located within a distance of 300m | ITC | List of Crèches Available - ULB-Public Health Department, Town Planning Department(GIS Map if available), | Primary |
| 31 | % of usage pattern of parks (age-wise, gender-wise) | % | | NA | ITC | ULB - Department of Engineer-ing - Ward / Sub-City Level Data; Perception Surveys | Primary |

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| 32 | % of parks with functional play equipment, swings etc. | % | | Refer to IS-6869 | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data | Secondary |
| 33 | % of parks with security guards | % | | 100% | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data, RWA | Primary |
| 34 | % of parks with drinking water, sanitation facilities and other amenities | % | | 100% | ITC | ULB - Department of Engineering - Ward / Sub-City Level Data | Secondary |
| 35 | Frequency of maintenance of parks (daily, weekly, monthly) | Frequency | | NA | ITC | ULB - Department of Engineering , Department of Horticulture- Ward / Sub-City Level Data | Primary |
| 36 | Provision and quantity of public seating to stop and rest, by neighbourhood 1. The average distance between resting points (e.g. benches, informal seating) within a neighbourhood. 2. The number of resting points that are comfortable and inclusive (sheltered, providing for different abilities) as a% of the total number of resting points. | Number / Ratio | | (ITCN EVALUATION & MONITORING METRICS, 2014, p. 44), Pt.15 1. Average Distance: 50m between resting points. 2.Number of Points: > 50% of route do have provision for resting points | C | ULB - Department of Engineering -Ward / Sub-City Level Data ; Street Inventory | Primary |
| 37 | % of area in parks dedicated to play spaces suitable for young children 0-6 Years ( Facilities such as low bar for toddlers to walk, sand boxes and clean pits) | Number / Ratio | | (ITCN EVALUATION & MONITORING METRICS, 2014, p. 63), Pt.38 more than 10% of existing park area dedicated to young children | C | ULB - Department of Engineering , Department of Horticulture- Ward / Sub-City Level Data, Primary Survey | Primary |
| 38 | Number of parks that have quality seating, facing 0-3 play areas | Number / Ratio | | (ITCN EVALUATION & MONITORING METRICS, 2014, p. 71), Pt. 40 More than 4 parks at neighbourhood level with the provision of quality seating & oriented towards 0-3 play areas | ITC | ULB - Department of Engineering , Department of Horticulture- Ward / Sub-City Level Data, Primary Survey | Primary |
| 39 | % of parks with adequate lighting | % | Numerator : Parks with Lighting Provided | (ITCN EVALUATION & MONITORING METRICS, 2014, p. 72), Pt. 41 - 100% | ITC | ULB - Department of Engineering , Department of Horticulture- Ward / Sub-City Level Data, Primary Survey | Primary |
| 40 | No. of Schools available in the neighbourhood (pre-primary schools, nurseries, AWCs) | Number | | (URDPFI Guidelines, 2014, 2015, p. 362), Table 8.48 specifies 1 per 2500 Population | ITC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Secondary |

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| 41 | Presence of affordable health clinic inside AWC the neighbourhood | Number/ Ratio | | (Key Indicators of Social Consumption in India: Health, 2019, pp. B-2), Appendix B2 AWC provide supplementary nutrition, non-formal pre-school education, nutrition and health education, immunization, health check-up and referral services. | ITC | ULB - Department of Public Health | Secondary |
| 42 | No. of Schools for Physically challenged available in the city (pre-primary schools, nurseries, AWCs) | Number | | (URDPFI Guidelines, 2014, 2015, p. 362), Table 8.48 specifies 1 per 45000 population | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | |
| 43 | % of schools adhering to planning norms (pre-primary schools, nurseries, AWCs) | % | | 100% | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 44 | % of schools approachable by all-weather roads (pre-primary schools, nurseries, AWCs) | % | | 100% | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 45 | Whether school has an easy access to emergency vehicles (ambulance, fire safety vehicles) | Binary | Y/N | NA | TC | ULB - Department of Education - Ward/ Sub-City Level Data & Street Inventory | Primary |
| 46 | % of government schools having kitchen sheds (for midday meal) | % | | All schools covered under the scheme | TC | ULB - Department of Education | Primary |
| 47 | **% of schools adhering to ventilation norm for the classrooms** | % | | IS 8827: 1978, Pt. 6.3, NBC-BIS Norm 5 to 7 air changes per hour | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 48 | Whether school is aware of harmful effects of usage of lead paint | Binary | Y/N | CPCB Standards (https://app.cpcbccr.com/AQI_India/) | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 49 | % of pre-primary schools that allow usage of school parks during non-school hours | % | | NA | TC | ULB - Department of Education | Primary |
| 50 | % of pre-primary schools with water supply as per BIS norms | % | | Refer to Table 10 of Indian Standard Code1172:1993 | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 51 | % of pre-primary schools with access to functional[84] and hygienic toilet facility | % | | Refer to Table 10 of Indian Standard Code1172:1993 | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |

84 (MoHUA, GoI, 2020, pp. 26-28)

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| 52 | % of pre-primary schools with access to clean drinking water | % | | Refer to Table 10 of Indian Standard Code1172:1993 | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 53 | % of pre-primary schools with water closets as per BIS norm | % | | Refer to Table 10 of Indian Standard Code1172:1993 | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 54 | % of pre-primary schools with ablution taps as per BIS norm | % | | Refer to Table 10 of Indian Standard Code1172:1993 | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 55 | % of pre-primary schools with urinals as per BIS norm | % | | Refer to Table 10 of Indian Standard Code1172:1993 | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 56 | % of pre-primary schools with washbasins as per BIS norm | % | | Refer to Table 10 of Indian Standard Code1172:1993 | TC | ULB - Department of Education - Ward/ Sub-City Level Data & or Institutional Surveys | Primary |
| 57 | Total number of Signalized intersections in Neighbourhood | Number | | NA | ITC | Traffic Police Department | Secondary |
| 58 | % of Signalised Intersections with Average Waiting Time above 45 Seconds | % | | (SLBs for Urban Transport, 2014), Section 1.2: specifies that should be <= 25% for LOS to be 1 | ITC | Traffic Police Department | Primary |
| 59 | Total Length of Streets in the neighbourhood | Number (Metre) | | NA | ITC | ULB - Department of Engineering -Ward / Sub-City Level Data ; Street Inventory | Secondary |
| 60 | % of street length with adequate lighting (Total street length with adequate lighting / Total street length in the neighbourhood*100); and map of identified stretches | %, Map | | (SLBs for Urban Transport, 2014), Government of India, Section 1.2: specifies that should be Lux>= 8 for LOS to be 1 for each street. 100% streets with Street Lighting >=8 | ITC | ULB - Department of Engineering -Ward / Sub-City Level Data ; Street Inventory | Primary |
| 61 | % of Street length having adequate pedestrian facilities (Total Length of Footpath(in km) x2/Total Street Length(in km) x2) and map of identified stretches | %, Map | | (SLBs for Urban Transport, 2014), Section 1.2: specifies that should be minimum width 1.2m for LOS to be 1 for each street. 100% streets with Footpath width>=1.2 m | ITC | ULB - Department of Engineering -Ward / Sub-City Level Data ; Street Inventory | Primary |
| 62 | Number of fire stations per 100,000 population | % | | NBC benchmark: 1 fire station for every 200,000 population | ITC | ULB/Fire Dept. | Secondary |
| | **Safety** | | | | | | |
| 63 | Whether intersections employ traffic calming measures in the neighbourhood | Binary | Y/N | NA | ITC | Traffic Police Department | Secondary |

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| 64 | % of Streets with Dedicated Non-Motorised Vehicle (Bicycles, etc.) track having minimum width of 1.5m or more (Total Length of NMV Track(in km)/Total Street Length(in km) x100) | % | | (SLBs for Urban Transport, 2014),Government of India, Section 1.3: specifies that should be minimum width 1.3m and % coverage to be >=50% for LOS to be 1 for street network. | ITC | ULB - Department of Engineering -Ward / Sub-City Level Data ; Street Inventory | Primary |
| 65 | % of Streets with CCTV coverage (Length of Street Length covered by CCTV(in km)/ Total Street Length(in km) x100) | % | | NA | ITC | ULB - Department of Engineering -Ward / Sub-City Level Data ; Street Inventory | Secondary |
| 66 | Fatality rate per lakh population | Number | | (SLBs for Urban Transport, 2014),  Section 1.7: specifies that the fatalities should be <=2 persons per lakh population for LOS to be 1 for street network. | ITC | Traffic Police Department, NCRB(https://ncrb.gov.in/) , DCRB | Secondary |
| 67 | Fatality rate for pedestrian and NMT (%) (No. of fatalities under pedestrians and NMT within the last year / Total number of fatalities within the last yearx100) | % | | (SLBs for Urban Transport, 2014), Section 1.7: specifies that the fatalities should be <=20%  of total fatalities for LOS to be 1 for street network. | ITC | Traffic Police Department, NCRB(https://ncrb.gov.in/) , DCRB | Secondary |
| 68 | % of children fatalities as a % of total fatalities | % | | NA | ITC | Traffic Police Department | Secondary |
| 69 | % of cases of speed limit violations as % of total cases of traffic violations | % | | NA | ITC | Traffic Police Department | Secondary |
| 70 | Whether wearing helmets is compulsory in the city | Binary | Y/N | THE MOTOR VEHICLES (AMENDMENT) ACT, 2019 , section 129 | ITC | Traffic Police Department | Secondary |
| 71 | Whether wearing helmets is compulsory for children, women and/or pillion rider in the city | Binary | Y/N | THE MOTOR VEHICLES (AMENDMENT) ACT, 2019 , section 129 | ITC | Traffic Police Department | Secondary |
| 72 | Whether wearing seatbelts is compulsory in the city | Binary | Y/N | THE MOTOR VEHICLES (AMENDMENT) ACT, 2019 , section 194B | ITC | Traffic Police Department | Secondary |
| 73 | Whether intersections around the schools are signalised | Binary | Y/N | As per city traffic norms | ITC | Traffic Police Department | Secondary |
| 74 | Speed limit near the school | Number | | As per city traffic norms | ITC | Traffic Police Department | Secondary |
| 75 | Whether city enforces ambient air quality standards as prescribed by CPCB | | | CPCB Standards (https://app.cpcbccr.com/AQI_India/) Desirable AQI: 0-50 | ITC | District Pollution Control Board | Primary |
| 76 | Annual RSPM (Size less than 10 microns) | Number | | (SLBs for Urban Transport, 2014) Desirable: 0-40 | ITC | District Pollution Control Board | Primary |

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| 77 | Whether city measures air quality | Binary | Y/N | NA | ITC | District Pollution Control Board | Secondary |
| 78 | Frequency of air pollution measurements | Binary | Y/N | NA | ITC | District Pollution Control Board | Secondary |
| 79 | Whether the city was within the ambient air quality standards in the last 6 months | Binary | Y/N | NA | ITC | District Pollution Control Board | Secondary |
| 80 | Whether city enforces water quality standards | Binary | Y/N | According to standards specified in (Service Levels in Urban Water and Sanitation Sector, 2011) by CPHEEO | ITC | ULB-Department of Engineering, District Pollution Control Board | Secondary |
| 81 | Whether city measures water quality | Binary | Y/N | NA | ITC | ULB-Department of Engineering, District Pollution Control Board | Secondary |
| 82 | Frequency of water quality measurement at City Level | Binary | Y/N | NA | ITC | ULB-Department of Engineering, District Pollution Control Board | Secondary |
| 83 | Whether treatment facilities are equipped to measure arsenic, lead and other metals at city level | Binary | Y/N | NA | ITC | ULB-Department of Engineering, District Pollution Control Board | Secondary |
| 84 | Whether city enforces noise quality standards | Binary | Y/N | According to standards specified in THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 | ITC | District Pollution Control Board | Secondary |
| 85 | Whether city measures noise levels | Binary | Y/N | NA | ITC | District Pollution Control Board | Secondary |
| 86 | Frequency of noise level measurement | Binary | Y/N | NA | ITC | District Pollution Control Board | Secondary |
| 87 | Whether city enforces silence zones | Binary | Y/N | NA | ITC | Traffic Police Department | Secondary |
| | **Governance and Planning** | | | | | | |
| 88 | % of municipal budget allocated for open spaces or parks | % | | NA | ITC | ULB - Accounts Department; Website (If available) | Secondary |
| 89 | % of municipal budget allocated for maintenance of open spaces and parks | | | | ITC | ULB - Accounts Department; Website (If available) | Secondary |
| 90 | Whether city has adopted child-friendly design standards for school buildings/ infrastructure | Binary | Y/N | NBC benchmark Minimum provision for community open spaces in residential and commercial areas: · 15% of the area of the layout, or · 0.3 to 0.4 ha/1,000 persons · For low income housing the open spaces shall be 0.3 ha/1,000 persons · No recreational space to be generally less than 450 square metres | ITC | ULB - Municipal Council Resolutions | Secondary |

| # | Data | Value | Response | Benchmark | Beneficiary | Source | Type of Data Source |
|---|------|-------|----------|-----------|-------------|--------|---------------------|
| 91 | Whether play areas at different levels (zonal, city, neighbourhood) correspond to master plan provisions of age appropriate play areas | Binary | Y/N | NA | ITC | ULB - Municipal Council Resolutions | Primary |
| 92 | No. of women recommendation/ suggestion forms a part of overall recommendation by CBOs/ RWA / equivalent bodies to ULB | Number | | (Infant, Toddler, Caregiver-Friendly Neighbourhood (ITCN) Framework and Guidelines, 2019) More than 3 recommendation from RWA/ equivalent bodies to ULB is from women representatives participated in RWA meetings | ITC | ULB- Municipal Council | Primary |
| 93 | Whether separate committees representative of Women, SHGs, Elderly are participating in Planning Process | Binary | Y/N | NA | ITC | ULB- Municipal Council | Primary |
| 94 | Whether city has adopted child-friendly vision in its urban projects and Planning | Binary | Y/N | NA | ITC | ULB- Municipal Council | Secondary |
| 95 | Whether city has a Development Plan/ Master Plan | Binary | Y/N | NA | ITC | ULB | Secondary |
| 96 | Whether any ITC friendly schemes are implemented at the city level (ICDS,NUHM, etc. and Local Schemes) | Binary | Y/N | NA | ITC | ULB | Secondary |
| 97 | No. of ASHA available in the neighbourhood | Number | | (Guidelines for ASHA and Mahila Arogya Samiti in the Urban Context, 2013, p. 1) ASHA in 1000-2500 population | ITC | ULB - Department of Public Health | Secondary |
| 98 | Number of fire personnel per 100,000 population | Number/ Ratio | | NA | TC | Fire Department | Secondary |

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