

# INFANT, TODDLER, CAREGIVER FRIENDLY NEIGHBOURHOOD 2.0

## POLICY FRAMEWORK





**Ministry of Housing and Urban Affairs**  
Government of India



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

<http://mohua.gov.in/>



Van Leer  
FOUNDATION

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

<https://vanleerfoundation.org/>

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

<https://wri-india.org/>



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

<https://smarnet.niua.org/nurturing-neighbourhoods-challenge/web/>

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# Abbreviations

ABD	Area Based Development
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
AWC	Anganwadi Centre (Early childhood care and learning centre in India)
AWW	Anganwadi Worker
CDP	City Development Plan
CFN	Child Friendly Neighbourhood
ECD	Early Childhood Development
FBC	Form Based Codes
GoI	Government of India
GDP	Gross Domestic Product
IGBC	Indian Green Building Code
IRC	Indian Road Congress
ITC	Infants Toddlers and Caregivers
ITCN	Infant Toddler and Caregiver-Friendly Neighbourhood
ITDP	Institute for Transportation and Development Policy
LAP	Local Area Plan
MoHUA	Ministry of Housing and Urban Affairs
MoUD	Ministry of Urban Development
MPD	Masterplan Delhi
NBC	National Building Code
NMT	Non-Motorised Transport
PWD	Public Works Department
RWA	Residential Welfare Association
SCM	Smart City Mission
SCP	Smart City Proposal
SLB	Service Level Benchmark
SPV	Special Purpose Vehicle
SWM	Solid Waste Management
TCPO	Town and Country Planning Organisation
TPS	Town Planning Scheme
ULB	Urban Local Body
URDPFI	Urban and Regional Development Plans Formulation and Implementation
UTTIPEC	Unified Traffic and Transportation, Infrastructure Planning and Engineering Centre

## EXECUTIVE SUMMARY

Every baby is born learning. Each time she/he is fed, comforted, or plays with others, she/he makes new connections about how people behave. From her/his first steps outside the home into the neighbourhood, the places she/he goes teach her/him how the world works.

When city leaders make decisions that work for the youngest residents, they are not only guaranteeing a productive, engaged future generation; they are also making decisions that will have a positive impact today; on their older siblings, their parents, and grandparents; their nurses and teachers; their neighbours; and on the local businesses in the neighbourhoods where they live.

What can cities do to nurture positive early experiences and protect against negative ones? How can neighbourhoods and therefore cities support parents to talk and play with children? How can neighbourhoods and cities minimise causes of stress and provide opportunities for rest and relief?

The following five documents aims to provide answers to these questions and provide city managers with the tools and knowledge they need to apply the lens of infants, toddlers, and their caregivers (ITCs) in the planning and management of their neighbourhoods.

### **Intended audience**

These documents prepare city-level stakeholders like Urban Local Bodies (ULBs), 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 equips city managers with the language of 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.

### [Policy Framework](#)

lays out the rationale for making improvements to the neighbourhood and explains the objectives of doing so, constituting an overall strategy for the ITC Neighbourhood (ITCN).

The vision is to create an ideal neighbourhood where infants, toddlers, and their caregivers feel safe, explore, play and engage with their built and natural environment, parents feel at ease that their children are safe outdoors, and communities are inclusive.

### [Evaluation and Monitoring Metrics](#)

provides guidance on metrics for evaluating progress toward the ITCN objectives. While the objectives define broader spheres of “qualities”, data indicators and their service level benchmarks (SLBs) tell city managers “quantities”. The document also lays out indicators for measuring positive behaviour change in relevant stakeholders for long term sustenance and impact. The objectives (in Policy Framework), indicators and design guidelines are aligned so that by implementing according to SLBs and their design guidelines, a city is also fulfilling objectives.

The Evaluation and Monitoring Metrics Document includes a set of 70 baseline data indicators - of which 42 are marked as “core” 28 are marked as “supporting.” The SLBs within each indicator give a range of categories to guide a neighbourhood from a baseline status of “surviving”, to “striving” (intermediate) or the ideal condition of a “thriving” ITC neighbourhood.

Furthermore, the Evaluation and Monitoring Metrics provide a parallel dashboard tool, which offers authorities accurate and simplified comparison across cities. It also explains methods of collecting this data and organising it into ITC Dashboards to monitor progress. The importance of data-driven, evidence-based planning and management is also discussed in this document.

### [Design Guidelines](#)

functions as the companion to the E&M Metrics section, providing guidance on how to implement ITCN features. While the E&M section talks about “what” to measure, Design Guidelines document answer the question of “how” one should achieve the benchmarks in the ITCN indicators from Evaluation and Monitoring document.

The guidelines are conceived as a supplement to other urban design guideline packages that already exist for the Indian context, offering pointed insights on what is pertinent to ITCs within current good practices of walkability and pedestrian-oriented urban design.

The guidelines are organised by the elements of a neighbourhood, giving the reader an easy-to-navigate list covering the breadth of the public realm, including the following:

- Neighbourhood covers the larger scale organisational factors, such as the overall character, the density, distance and mix of facilities within the area.
- Informal settlements focus on the key elements of the public realm such as streets, public spaces in these settlements which can be made conducive for young children and their caregivers.
- Streets and Mobility are mainly mobility-related spaces concerning the practicalities of moving comfortably in the public realm.
- Parks and open spaces cover common key destinations that matter to ITCs.
- Social infrastructure cover community facilities.
- Ambient environment covers exposure to poor air quality.
- Urban services cover water, electricity, waste, drainage and other environmental factors.

### [Policy Workbook](#)

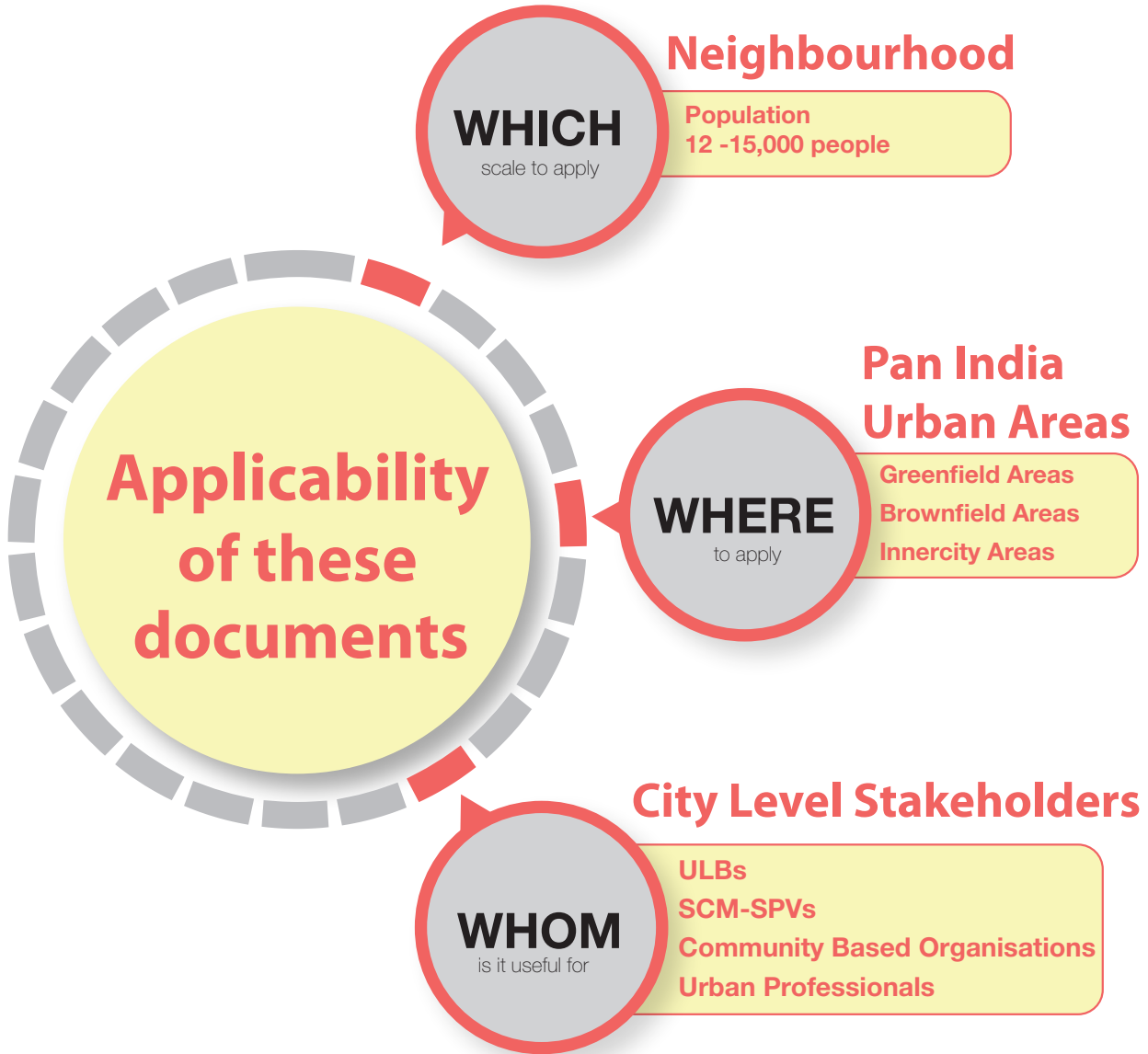
links the design guidelines to policy, providing an analysis of current spatial policy and identifying opportunities for change therein according to the needs of families in neighbourhoods. It guides the ULBs, local stakeholders and citizens to answer the following questions:

- Which policy framework has the potential to be used for creating an ITC friendly neighbourhood - in long-term and short-term?
- What are the existing guidelines and do they provide enough ITC-friendly norms?
- What institutional framework will help in applying these guidelines at the ULB and special purpose vehicle (SPV) levels?
- How can stakeholders be involved in the implementation process?
- What kind of policy and implementation framework may be used for application of ITC guidelines?
- Brief recommendations for policy-level amendments for applying ITCN design guidelines effectively

### [Best Practices Compendium](#)

gives visual examples of successful projects that can be used for discussion both internally and with the public to cohere a shared vision of goals. The compendium draws on Indian and global examples of neighbourhood level interventions that meet the five different ITCN objectives. The compendium highlights key design interventions in each example, how they meet the objectives of creating a neighbourhood for ITCs and how ITC measures are implemented. It illustrates how a combination of components can create a holistic solution and be beneficial to ITCs.

We hope that this set of interlinked documents will mobilise city stakeholders to place emphasis on neighbourhoods that give their young children a good start in life, thus helping shape new generations of productive workers and upstanding citizens. When urban neighbourhoods work well for pregnant women, infants, toddlers, and their caregivers, they also tend to nurture strong communities and economic development. A city that works for ITCs, ultimately works for all.



## FREQUENTLY ASKED QUESTIONS

### **How does this book relate to the other seven documents included in the Capacity Building Framework?**

The 100 Smart Cities Mission Capacity Building Framework Documents include the Infants, Toddlers, Caregivers-friendly Neighbourhood (ITCN) Framework in addition to frameworks for streets, public transport, e-mobility, water and waste water, city health planning, energy and environment, data-driven transportation systems, urban freight, and form-based codes. Each of these subjects has a critical bearing on the quality of life in a city for young families, although the reasons why, are not always obvious. The ITCN Framework documents explain in detail, various factors of a city that are significant to the healthy development of children, why that is, and how to best implement ITC projects and principles where none currently exist.

### **Why focus only infants, toddlers, and their caregivers?**

To focus on the wellbeing of infants, toddlers, and their caregivers does not come at the exclusion of other groups. Young children, especially babies and pregnant mothers are among the most vulnerable groups to the negative impacts, urban systems can have on human health, such as air pollution, noise pollution, and dangerous infrastructure. Because of their heightened sensitivity, ITCs are considered to be an “indicator species.” In other words, if a city is supporting ITCs’ wellbeing, it can be reasonably assumed that everyone else will be supported as well.

### **Why focus design and planning interventions for ITCs at the level of the neighbourhood?**

The neighbourhood is where babies and young children spend the majority of their time. Starting from birth, infants have a limited range of travel stemming from their need for almost constant feeding and sleep. By the time a child is two years old, he or she is able to spend greater amounts of time in the public realm,

but remains vulnerable, and it is generally most comfortable for caregivers to stay close to home. Any planner interested in building healthfulness and equity into their cities must proactively address the limitations in mobility that ITCs have.

### **My department doesn’t focus on kids so why would I care about ITCs?**

ITC planning belongs to every department of a municipal institution. The ITCN Framework documents explain just how important everything from crosswalks, to drainage, to park maintenance, to utilities are to ITC wellbeing. In fact, for ITC planning to be effective, recent case studies have shown that cross-departmental collaboration, and “mainstreaming” ITC concerns are critical to the sustainable success of interventions.

### **Where can I find more information on ITC planning?**

There are a number of resources for ITC planning ideas available on the [Van Leer Foundation’s Urban95 program website](#). The [VLF Urban95 Starter Kit](#) is in a downloadable PDF format, and gives decision-makers and citizens alike a list of projects at various scales that have been shown to have positive impact on children aged 0-5 and their caregivers.

### **Which cities around the world are considered ITC-friendly?**

Many cities boast features that are ITC friendly - sometimes without necessarily stating ITC wellbeing as their goals. The Objectives section located in the Policy Framework document will give the reader a sense of what kinds of qualities exist in an ITC-friendly space. In general terms, they should be safe, green and unpolluted, inclusive of anyone who wants to use it, easy to physically access, and playful. Streets and public spaces from Recife to Copenhagen may satisfy these five objectives all at once. When we look at best practice case studies of where ITC needs are being met, we also realise that they are still far from being a

systematic part of urban planning. This ITCN document offers guidance at a holistic level for the first time, about how these considerations ought to be included at every level from daily maintenance habits, to National-level policy.

### **Does this project cover neighbourhoods in informal settlements as well?**

The Indian Smart City Mission identifies three types of development for which the ITCN Capacity Building Framework Documents directly addresses: city improvement (retrofitting), city renewal (redevelopment), and city extension (Greenfield development). Within these project typologies, it is likely that unplanned or informal dwellings will be affected. Such informal settlements have always co-existed with planned neighbourhoods in Indian cities. Therefore, it is important to consider informal settlements as an integral part of the ITCN approach. For more details on how to adopt the ITCN approach for improvements in informal settlements, refer to the Design Guidelines document.

### **How many ITCN indicators proposed in the documents?**

There are 70 indicators proposed in this Framework, specifically geared toward measuring the performance of a neighbourhood for ITC wellbeing. The set is broken down into two categories of 42 “core” indicators, and 28 “supporting” indicators. The Evaluation and Monitoring document also includes an annexure providing guidance on a minimum data set required and activities required as a basis for achieving service level benchmarks.

### **How will this Framework help city managers at Urban Local Bodies (ULBs)?**

The information in this document is presented in a way that will be especially useful to city managers and engineers working within ULBs. Making changes to neighbourhoods

is a contentious job - and transformative, sustainable results require the buy-in of a wide swath of stakeholders. These documents are written to give readers both the tools and the confidence they need to propose and carry out ITC interventions. The Policy Framework and the Design Guidelines will be especially helpful in introducing readers to the language of early childhood development (ECD) and child and family health as they relate to environmental factors. While the space in these documents is limited, they include reference material wherever possible, to direct the reader to further resources.

## PREFACE

### Why focus on infants, toddlers, and young children?

The qualities of a child's physical environment impacts his or her health from the first day of life. Babies are much more sensitive than adults; toxic elements disrupt and interfere with their internal processes much more than those of adults. As a comparison, a toddler takes between 40 and 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. When toxins like lead and fine particulates absorb into the bloodstream of someone still in the first thousand days of life, they insidiously interfere with one's ability to learn by reducing memory and focus: difficulties that can quickly express in depression and mental health issues even at a young age.<sup>1</sup>

When we refer to healthy environments we include mental health and personal and collective well being as part of the most basic levels of survival.

In the same way that climate change is an unjust phenomenon, in that its harms are overwhelmingly borne by people who had no role in its creation, the damage done to children's lives by toxic cities is fundamentally unjust. Decisions made about the public realm will burden our children with limitations well before they have made even a single decision on their own, or are able to grasp the risks and react to protect themselves.<sup>2</sup>

The vulnerability of infants as well as the duration that these ills will persist in their bodies and minds, ought to make them an obvious priority stakeholder group for spatial policy.<sup>3</sup> Unfortunately babies and toddlers have not historically been considered stakeholders. Their inability to express their needs and desires is a big reason for that - at least an older child can tell us what she / he wants from the city.

[Click here to watch the "Beginning of Life" trailer](#)

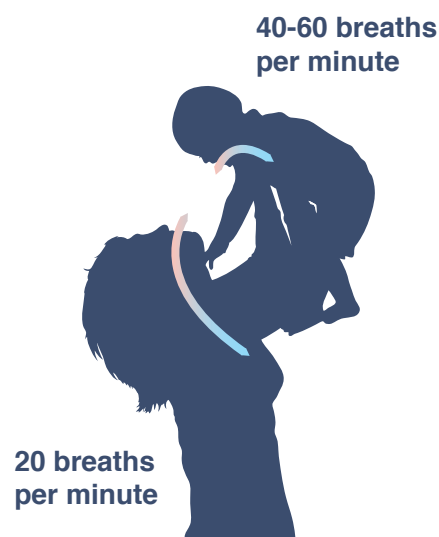


Figure 1.1 Breathing differences between adults and 0-2 year olds

#### Notes:

<sup>1</sup> <http://www.thelancet.com/commissions/pollution-and-health>

Perera FP, Chang H-w, Tang D, Roen EL, Herbstman J, et al. (2014) Early-Life Exposure to Polycyclic Aromatic Hydrocarbons and ADHD Behavior Problems. PLoS ONE 9(11):e111670 <https://doi:10.1371/journal.pone.0111670>.

Perera FP, Rauh V. Effect of prenatal exposure to airborne polycyclic aromatic hydrocarbons on neurodevelopment in the first 3 years of life among innercity children. Environmental Health Perspectives. August 2006;114(8):1287-92.

<sup>2</sup> Unicef's Convention on the Rights of the Child: [https://www.unicef.org/crc/files/Rights\\_overview.pdf](https://www.unicef.org/crc/files/Rights_overview.pdf)

<sup>3</sup> (The linkage between public health and urban planning remains tenuous in most places).

[Click here to watch "Istanbul Mega City Mini Citizens" documentary trailer.](#)

# “Urban planning and development must enhance the talent, creativity and aspiration of children.”

**Venkaiah Naidu,**  
Former Vice President of India

Babies and toddlers spend plenty of time outdoors, either as companions to the daily work of a caregiver, as participants in recreation time in parks and playgrounds, or as part of an infinite number of other arrangements that bring them into the public realm on a daily basis.

Babies and toddlers in the public realm are invariably accompanied by a caregiver (usually female, although fathers in many settings take on the responsibility as well); they are a pair but also one. And in the Indian context that caregiver is usually female. To design a public realm that supports the well-being of babies and toddlers requires design that specifically addresses the health and safety of women. The term ITC will be used throughout this document to refer to all the possible combinations of infants, toddlers, and caregivers, as linked individuals in the public realm. When designing for urban childhoods, planners need to be sensitive to the degree to which domestic labour is not restricted to the home. They require an almost constant connection to the city, much more than the typical wage earning bread-winner who ‘leaves and returns’ home once each day.

With all the dangers posed by the city it may strike the reader as counter-intuitive that these documents would focus on adjusting Indian neighbourhoods such that they encourage families to spend more time outdoors, walking and amidst nature. But that is precisely the approach that is urgently needed in Indian cities today. High levels of well-being among populations are what make regions competitive. By far the most efficient way to improve well-being is to systematically build and maintain health-first infrastructure and services close to where people live. It is crucial to understand that every one of the harms we encounter in our neighbourhoods today are of our own making, and we are just as capable to undo them.

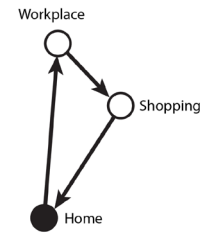


Figure 1.2 The mobility chain of a person who makes a living with daily paid employment.

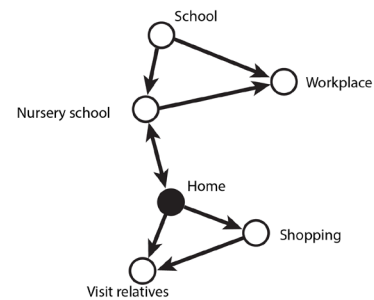


Figure 1.3 The mobility chain of a person whose day includes a combination of paid employment, caring, and home-making.

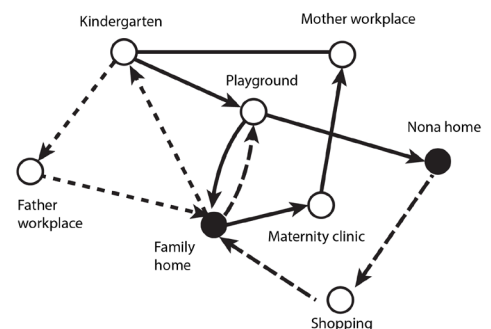


Figure 1.4 The mobility chain of an ITC family: multiple caregivers, each engaged in combinations of paid employment, caring and home-making.



It is a matter of deciding to do so with a clear plan. Spatial planning is uniquely poised to make major positive impacts in the short, medium and long term to the conditions of our neighbourhoods.

A neighbourhood can furnish a rich world of imagination and adventure that nurtures a vibrant creative life. One located in the centre of a city can still link children to the natural world with good design choices, allowing them to witness the wonder of eco-systems, and instilling a care for the earth that will last the rest of their lives. A neighbourhood of engaged and curious children will connect parents and strangers in public places where a sense of trust and familiarity knit the fabric of community. This Framework should be considered a primer to plan and implement the change that is required to get families with young children into the public realm.

By far the most efficient way to improve well-being is to systematically build and maintain health-first infrastructure and services close to where people live.

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## WHO IS AN ITC?

Infants, Toddlers, and Caregivers or 'ITCs' come in all kinds of combinations of ages and genders. The term refers to a grouping of at least two people, the youngest of whom is under five years old. In the photo at right we see a mother and her three-year old child walking side by side. In many cultures, and India is no exception, caregivers are usually women.



The caregiver is not necessarily a mother or father - or at least, not only. Caregivers might be a female nanny, either alone, or accompanying the mother on a Sunday afternoon in a market area. Caregivers may also be a grandparent, or any other relative.



The ITC unit can be a one-year old and the father, here trailed by the mother, while the daughter is with the father.



For more on "who is an ITC," see Urban95 challenge winners in Accra or Hanoi.

## ITCS COME IN MANY VARIETIES

ITC groups are made up of a frequently shifting cast of family members and neighbours who take on caregiving duties in the course of the day. Here, the grandmother takes the children with her on an errand. The daughter is around three and brother almost six.



ITCs can be big groups of fathers, mothers and adult siblings out for a weekend excursion in the city.



Or sometimes the caregivers are not adults but a group of older children taking care of a younger sibling. While young children should be in the care of a responsible adult, we know that there are young children in the care of older children. Caregivers may come from any background, any age group, and in any number.



# ITCN DOCUMENT STRUCTURE

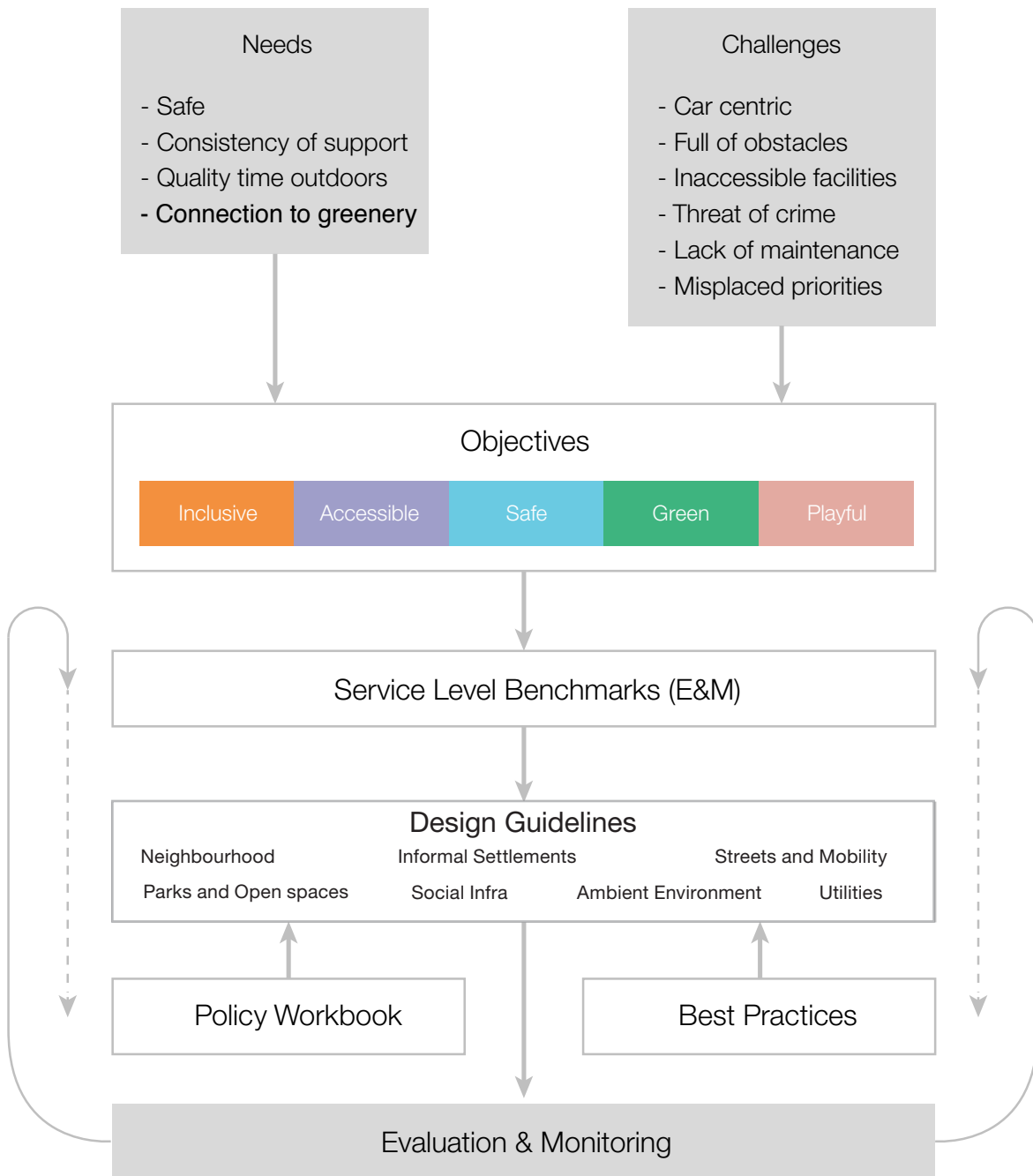


Figure 1.5 ITCN Capacity Building Framework Document structure as a constant cycle of monitoring and improvement.

## HOW TO USE THESE DOCUMENTS

The Smart Cities Mission, Ministry of Housing and Affairs, Government of India, has taken on the mandate to provide a comprehensive package of urban design measures to support the health and well-being of infants, toddlers, and their caregivers at the neighbourhood level to the 100 Smart Cities.

These documents equip city level planning and engineering officials, community organisations, and urban development professionals, with the

tools that they would need to create a holistic neighbourhood where families will thrive. It will also equip city managers with the language and rationale of child development, to enable officials to make sound decisions on their own and to be able to defend their thinking in front of an audience. It is broken into the following five documents:

### **1. Policy Framework**

lays out the rationale for making improvements to the neighbourhood and explains the objectives of doing so, constituting an overall strategy for the ITC Neighbourhood.

### **2. Evaluation and Monitoring**

**Metrics** provides Service Level Benchmarks to assess the existing conditions and progress of neighbourhoods.

### **3. Design Guidelines**

are the companion to the E&M section, providing guidance on how to implement key ITCN features.

### **4. Policy Workbook**

links the design guidelines to policy: providing an analysis of current spatial policy and identifies opportunities for change according to the needs of families in neighbourhoods.

### **5. Best Practices Compendium**

will give visual examples of successful projects that can be used for discussion both internally and with the public to cohere a shared vision of goals.



## 01 Infants, Toddlers, and Caregivers

The neighbourhood is where generations of children thrive and grow. The ITCN framework contextualises the focus on infants, toddlers, and caregivers within the neighbourhood, and connects its relevance as a planning unit within the Smart Cities Mission. This section sets out a vision for an ITC Neighbourhood (ITCN), followed by the critical objectives of this approach.

### WHY FOCUS ON THE EARLY YEARS

In 2018, estimates put India's population at 18% of the world total. Besides, India is one of the youngest countries in the world. Children between the ages 0-4 make up 9.7% of the population of India (Census of India 2011). Much of this population is or will be living in cities over the next decade.<sup>4</sup>

Both in India and abroad, city building has traditionally prioritised economic productivity to the exclusion of much else. The unobstructed movement of people and goods in cities has underlaid the one-dimensional pursuit of National economic growth. Women, children, household work, learning, and daily play are not included in GDP creation. The needs of a child below the age of five could be considered to be at odds with that single objective.

Investing in this population and helping them build the capacities to participate in future economic growth and the cultural life of India will undoubtedly be the best investment for a sustainable future. This is the narrative around 'growth' that should become part of the National conversation. It is not enough to reduce the infant mortality rate in a country. For a State to have a promising future, it is also essential that we recognise that children need to thrive.

18% of the world's population is in India

9.7% of this is between 0-4 years

Focus on the needs of Infants, Toddlers and Caregivers in the planning of Smart Cities in India is part of what can fulfil the goals of sustainability, inclusion, health and safety.

Notes:

<sup>4</sup> [Census of India, 2011](#)

Children under the age of five access their physical surroundings through and in interaction with their caregivers, who in the Indian context are usually female (including mothers, grandmothers, and hired help as well as older siblings). Infants, toddlers, and their mainly female caregivers make for one of the most powerless groups in Indian society. Their daily mobility needs concerning safety, pace and radius of movement is vastly different from that of workers (usually overwhelmingly male) in a city in India. Infants, toddlers, and caregivers use the public realm of a city every day - its streets and open spaces - more than any other group. And yet they are the group whose needs are most often ignored by planners and designers.

Focusing on the needs of young children in the planning of cities in India is part of what can fulfil the initiative's stated goals of sustainability, inclusion, health, and safety.

From the height of an average three-year-old at 95cm, the view of a city street mostly consists of vehicle tires and exhaust. This is not the adult view. The world is experienced in fundamentally different ways for small children, which seems obvious when pointed out, but is not factored in any of the standards, tools, or effective common knowledge of city planners and engineers.

ITC makes for the most powerless groups in society — Infants, toddlers and their caregivers (mainly women)

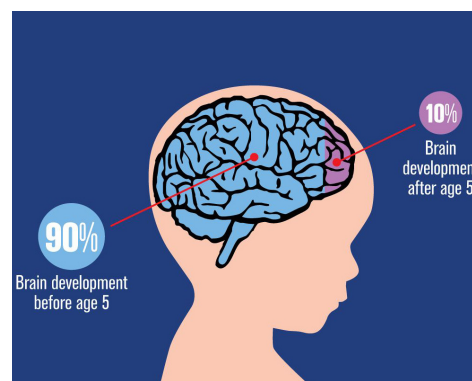


Infants, Toddlers, and Caregivers use the public realm of a city — more than any other group. Yet they are the group whose needs are most often ignored by planners and designers.

## ITC NEEDS FROM A CITY

### List of Needs

- **Need for feeling safe; both caregiver and child**
- **Repetition of supportive behavior**
- **Spending quality time outdoors, on a regular basis**
- **That space is best when its green**



The human infant is one of the few mammals for whom brain and physical development take place mainly outside the womb. From an evolutionary standpoint, this ensures that the infant adapts to the physical and emotional environment it is born into, to ensure its successful survival. That development is most intensive within their first thousand days, slowing within five years, still continuing to develop afterwards but at a much slower pace.

Early childhood is the life phase when patterns are 'hard wired' into our behaviour and those brain connections that are used more frequently, become the paths that sensory material take more readily.<sup>5</sup> A baby who is raised in the dark will lose the retinal cells that detect colour even if they are born with normal eyesight. Studies on children who have suffered severe neglect demonstrate the importance of the earliest years in the starkest terms.

The effects of air pollution and poor sanitation are the most severe on children within the first thousand days of their lives.

The rich synaptic connections between neurons in an infant's brain are created in-utero and develop most intensively in the first thousand days of life. When a child is deprived of interaction and stimulation, their neuron growth is radically stunted.



## THE NEED FOR FEELING SAFE: BOTH CAREGIVER AND CHILD

The physical safety of women and children go hand-in-hand. Young children take all their cues, about whether exploring something, tasting something, touching something is a good idea by looking at the expression on the caregiver's face or the caregiver's bodily response. An anxious response from the caregiver is a huge deterrent to a toddler.

Our cities are and also are perceived as unsafe to its female inhabitants and for other caregivers.<sup>6</sup> Stressors from the built environment such as loud horns, speeding vehicles, lack of pedestrian facilities add to a caregiver's anxiety. Nationally reported incidents of crime against women add to the perception of a city being unsafe for them. This fear-based exclusion limits their access and mobility within a city. It is not uncommon to find many parks and open spaces in Indian cities occupied by men and youth, and less by women and young children. A woman with a child is often more anxious when she has to move on a city street than if she was by herself or if she stayed at home. She has to be alert about her own and the child's safety, since young children are smaller in height, therefore less visible, and may move unpredictably.

A sense of being physically unsafe (especially as transferred from the caregivers' anxiety about

safety) leads to raised alertness and hyper-vigilance. This anxiety, which when sustained over a period of time, leads to an inbuilt high cortisol reaction in the body. This is directly related to lowered immune system responses and a reduced capacity to explore and learn. It is also associated with hyperactivity and other anxiety responses in young children.<sup>7</sup>

The threat of physical harm has a massive emotional impact on women and the children in their care. It leads to anxiety, lowered immune system responses and in children, a reduced capacity to explore and learn.

Notes:

<sup>5</sup> UNESCO defines Early Childhood as from birth to eight years of age.

<https://en.unesco.org/themes/early-childhood-care-and-education>

<sup>6</sup> National Crime Record Bureau (NCRB) 2016 - A total of 338,000 incidents of crime against women were recorded in 2016 against the total of 329,000 crimes against women in 2015



## REPETITION OF SUPPORTIVE BEHAVIOR

It is not only food and cleanliness that keeps human babies alive but also the quality of their interaction with others. The difference between survival and thriving is based both on the caregiver created environment and the physical built environment.

The most significant events in the lives of small children are those that take place daily and repeatedly, in the most ordinary ways. For example, what and how they are fed, daily hygiene, the quality of the air they breathe and the water they drink, what, how and with whom they play.

Responsive, playful, meaningful and calming interactions with their caregivers, perceived safety, are opportunities to explore their capabilities and their surroundings. Through repetitive daily interactions, that take place in the home and its immediate vicinity and its people, this life-stage creates a foundation for enhanced cognitive function, a sense of safety in future relationships, community cohesiveness and a sense of mastery in relation to the physical environment.

The most significant life events for small children are ordinary activities that take place daily and repeatedly.

For more details, there are a number of resources online. See :  
<http://www.developingchild.harvard.edu/>



## INFANTS AND TODDLERS REGULARLY NEED QUALITY TIME OUTDOORS

For young children, everything is an opportunity to learn, primarily through using their bodies to walk, balance, run, jump, climb, roll or fall. It helps small children learn the strength and limits of their capacities and the risk they would need to take. Infants and toddlers are easily stimulated and overwhelmed, and therefore they need small doses of exciting things to see, touch and listen to, at their height. We need to integrate outdoor play into the flow of urban life, which is to say, in their ordinary daily activities and not only as a special event, like a planned trip to a playground.

Being exposed to nature has been repeatedly found to be beneficial in reducing stress both in adults<sup>8</sup> and children<sup>9</sup> and better for the overall mental health of a population<sup>10</sup> with the most significant effects on the youngest ages. Recognition of the importance of outdoor play and immersion in nature for holistic child development goes back to the very beginning of early childhood education. Friedrich Froebel, the influential 19th-century German scholar, who coined the term kindergarten, emphasised the role of the garden and the importance of nature in (child) development.<sup>11</sup>

Safety need not mean restriction, yet cities impose maximum limits on young children to keep them from harm. Safety concerns being applied even in playgrounds have resulted in spaces that are boring<sup>12</sup> and therefore under-utilised. There are many organisations worldwide that are re-designing play spaces for children to be more engaging and adventurous.

“Playful exploration contributes to children’s resourcefulness.”

Stead and Kelly (2015)

“Play in outdoor environments can make a positive contribution to wellbeing across age groups and socioeconomic backgrounds.”

The Routledge Handbook of Planning for Health and Well-Being

### Notes:

<sup>7</sup> National Scientific Council on the Developing Child. (2005/2014). Excessive Stress Disrupts the Architecture of the Developing Brain: Working Paper 3. Updated Edition. [https://developingchild.harvard.edu/wp-content/uploads/2005/05/Stress\\_Disrupts\\_Architecture\\_Developing\\_Brain-1.pdf](https://developingchild.harvard.edu/wp-content/uploads/2005/05/Stress_Disrupts_Architecture_Developing_Brain-1.pdf)

<sup>8</sup> Martyn, P., & Brymer, E. (2016). The relationship between nature relatedness and anxiety. *Journal of Health Psychology*, 21(7), 1436–1445. <https://doi.org/10.1177/1359105314555169>



## CHILDREN NEED GREENERY

Children thrive when they are in contact with nature and natural materials, not just as a special trip to a local forest but on a regular basis. Consistent exposure to nature has been found to have immense positive benefits on the health of children, right from their intra-uterine life. As infants with their mothers, nature proves calm and a slow pace of stimulation that is not overwhelming to the senses. Toddlers between the ages of two and five benefit most from being exposed to nature as a way to enhance their sense of understanding of their own body and build a sense of competence, as well as use imagination in play, without the need for toys and equipment.

In the early years as well as when older, children need to feel free to use their imagination to play with natural materials. Environments with a variety of textures that they can explore – trees to climb, leaves to run in, stones to build imaginary structures with – are the most beneficial to the growing brain, both structurally and emotionally. Green spaces have repeatedly been found to reduce stress in children and adults and also improve mental health.<sup>13</sup>

“Urban trees and vegetation help decrease stress and aggressive behaviour in cities, and have been linked to crime reduction.”

NACTO Global Street Design Guide

For more details, there are a number of resources online. See :

<https://naturalearning.org/wp-content/uploads/2017/09/Benefits-of-Connecting-Children-with-Nature-InfoSheet.pdf>

<https://www.omes.nl/wp-content/uploads/2010/08/Play-in-children-s-development-health-and-well-being-feb-2012.pdf>

### Notes:

<sup>9</sup> Nancy M. Wells, Gary W. Evans, 2003. A Buffer of Life Stress among Rural Children. Environment and Behaviour, <https://doi.org/10.1177/0013916503035003001>

<sup>10</sup> Jo Barton and Jules Pretty. What is the Best Dose of Nature and Green Exercise for Improving Mental Health? A Multi-Study Analysis. Environmental Science & Technology 2010 44 (10), 3947-3955, DOI: 10.1021/es903183r

<sup>11</sup> <https://www.naeyc.org/resources/pubs/yc/jul2017/outdoor-play-child-development>

<sup>12</sup> <http://pediatrics.aappublications.org/content/129/2/265>

<sup>13</sup> Studies of green spaces and health have demonstrated stronger evidence for mental health benefits, and for stress reduction, compared with other potential pathways to health (reviewed by de Vries, 2010; Gascon et al., 2015)

# WALKING RANGE AND ACCESS BY AGE

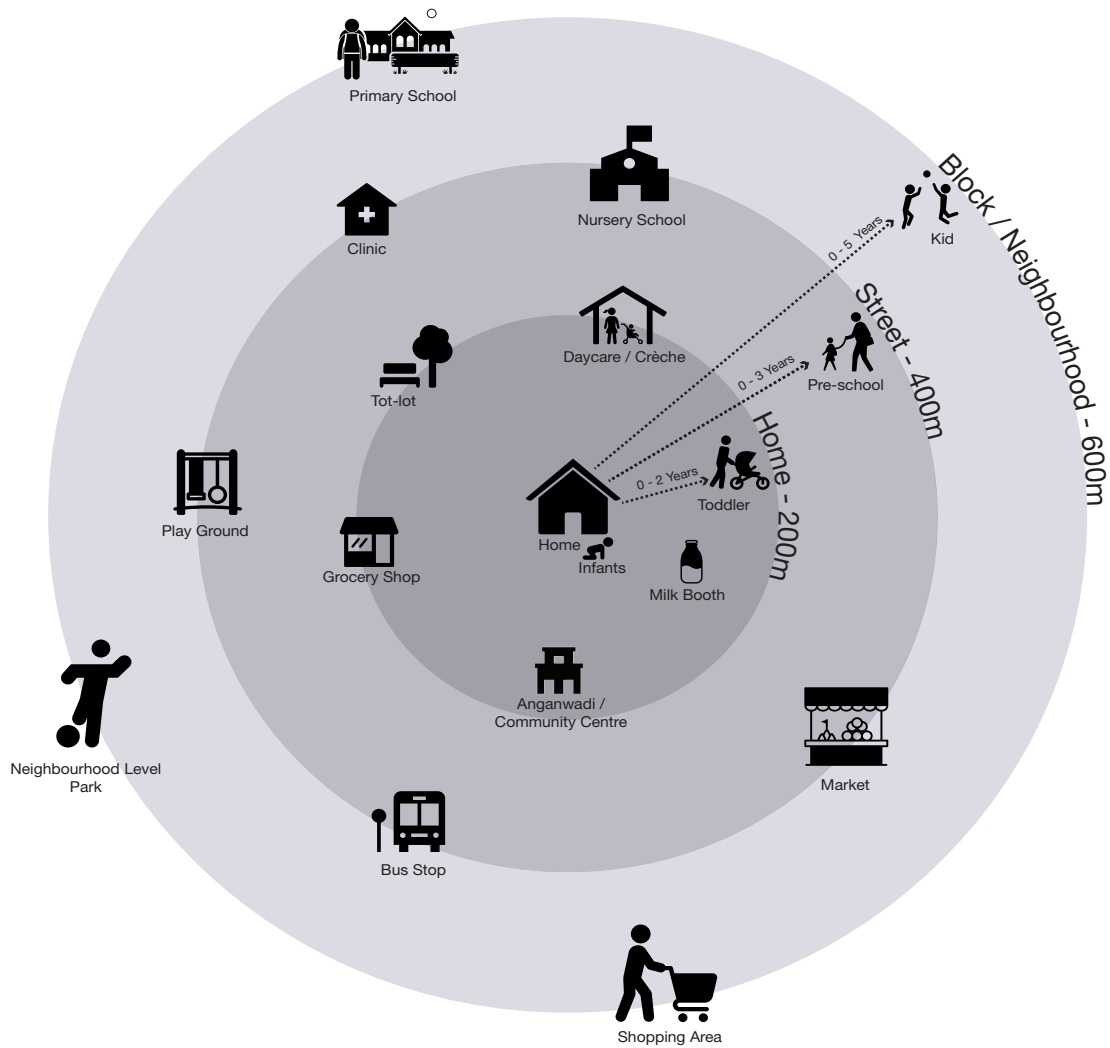


Figure 1.6 Location of various facilities and amenities linked to child's physical development

Figure 1.6 shows the hierarchy, and the range and access of services for children linked to their mobility and age. The progressively expanding worlds of children below the age of five: the home, the street, the block and the neighbourhood. The walkability of the very young, either independently or with caregivers in strollers or bikes is limited to services that are under one kilometre from their home.

## 02 The Neighbourhood

As a child grows, her reach into the city increases in stages. In early infancy, the home forms the centre of the child’s world. This expands to the street, then to the neighbourhood and, finally to the city.

### SCALE OF THE NEIGHBOURHOOD

For very young children, life is experienced at a small scale. The focus of their world are the streets and spaces in front of their homes, and immediate facilities surrounding their homes, such as parks and schools, that can be independently and easily accessed. There have been a number of studies conducted worldwide that have reviewed the access of services and facilities through the perspective of young children. (See sidebar). These vary based on a child’s need and age. (See Figure 1.6)

“The likelihood of a child using a destination declines beyond about 800m from their home. This restricts their range and access to amenities to below one kilometre.”<sup>14</sup> Taking this range of access for a young child as maximum one kilometre, from any one point to the other, we can define a zone that covers an area of roughly 60-80 hectares that contains all the community facilities and amenities within easy access for a young child. Most metropolitan cities in India have an average density of 200-300 people per hectare, as defined by [URDPFI](#).<sup>18</sup> This corresponds to a population of twelve to fifteen thousand people living within this zone, which in Indian planning norms, equates to a ‘neighbourhood unit’.<sup>19</sup>

The neighbourhood unit, in this context, becomes the ideal template to plan and implement the change in our built environments to cater for ITCs, and thus forms the main focus of this study. By thoroughly improving one’s neighbourhood for families with young children, we create a road map to scale across an entire city.



© www.populationconnection.org/united-states-stop-incentivising-childbearing-tax-advantages/children-450925/

**Toddler Walkshed** - the distance that a curious and perpetually-distracted toddler can navigate city streets on foot in 10-20 minutes.<sup>15</sup>

**Popsicle Test** - success of a neighbourhood determined if a small child can walk to a store, buy a popsicle, and return home before it melts.

**Playshed** - within 800 feet of every residential lot, there should be a “Civic Space designed and equipped as a playground”<sup>16 and 17</sup>

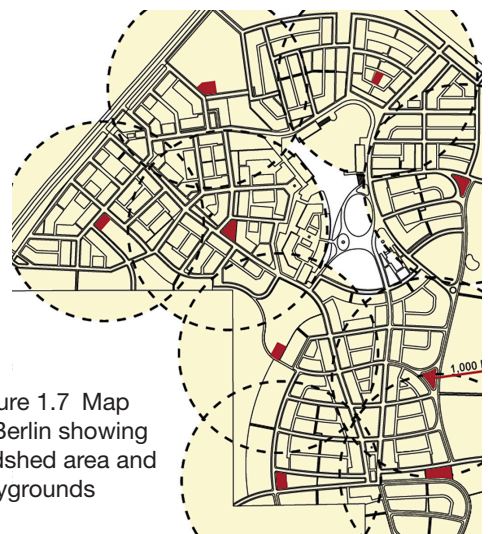


Figure 1.7 Map of Berlin showing pedshed area and playgrounds

## NEIGHBOURHOODS IN PLANNING TRADITIONS

The closest thing to an ITC neighbourhood in the popular imagination is probably the post-war suburban unit in the west.

For young families, suburbs offered a strong connection to nature, fresh air, community, and the utmost sanctity in which to raise children; all the aspects that we consider central to the ITC Neighbourhood approach. But for all the safety and climactic control designed into them, suburban housing typologies were fundamentally anti-urban. They were intentionally un-walkable because of their reliance on the car for mobility.

The post-war suburban typology's precursors came from British rural residential planning, one of the prime examples of which can be found today in Lutyens' Delhi and other low-density single-family neighbourhoods.

The appeal of the car as a moving bubble of comfort, clean air and safety remains incredibly appealing today across the world, and just as much, a marker of belonging to the middle class. That pattern of consumption has overwhelmed the streets of Indian neighbourhoods faster than anyone could react.

Ironically many of the features that we think of today as being desirable and even passively 'smart' design, are found in the layout of the early traditional Indian neighbourhoods called mohallas. Mohallas had no rigid boundaries and were full of lively public spaces. In between the clusters were open spaces known as chowks which contained wells, religious places, or a banyan tree, and served as sites for social gatherings, rituals, celebrations, and dialogues.

[Smart City Guidelines](#) discuss ideas like holistic "urban eco-systems," "sustainable environment," "safety and security of citizens particularly women, children and the elderly," and "health and education," all of which were present in strong degree in an

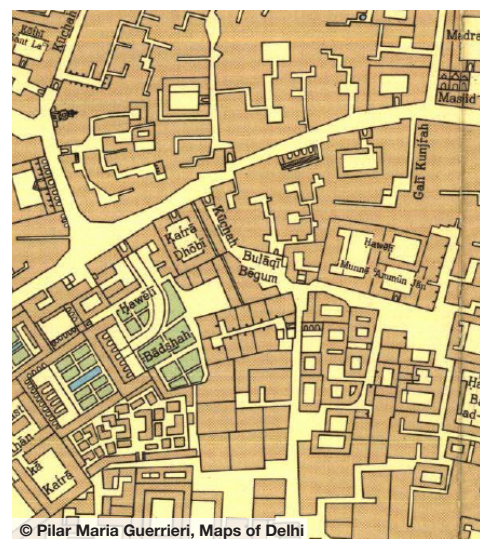
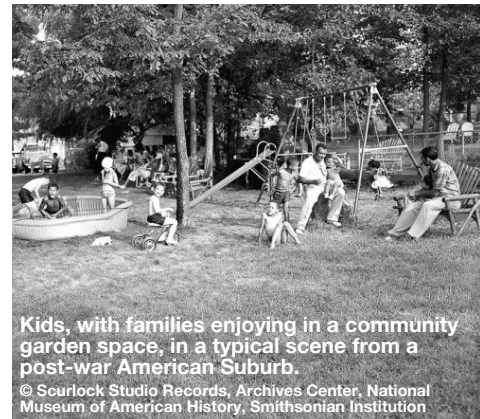


Figure 1.8 *Mohallas*, traditional Indian neighbourhood clusters

urban form invented quite organically, centuries ago. The mohalla also contained efficient circulation - walkability and the accessibility of the community to the local city centre and public services. In terms of climatic control as well, the design and layout of buildings and dwelling units was based on vernacular design strategies that were well-tested and adapted to the harsh, dry climate of the region.

The city plans as we find them today are also organised into a 'Corbusian' cellular system of sectors based on the 'neighbourhood unit' concept. Each sector or neighbourhood unit is the same size: 800m x1200m, which was determined on the parameter to provide all public services and facilities within a 10-minute walking distance of the residents. A planned sector can vary between 3,000 and 20,000 people depending upon the size of plots, topography of the area, and urban design considerations. Each sector is turned inward spatially, with four vehicular entries, a decision intended to maintain a tranquil and serene environment conducive to the enrichment of life.

In addition, the presence of schools, healthcare, shopping, and work opportunities in distant locations has encouraged a lifestyle pattern where residents travel great distances for basic needs. This further decouples the link to the local.

Neighbourhoods, and the kind of local public life that they are able to support when designed well are successful when they provide a healthy, safe environment, a sense of community and place, and a good quality of life. A rich and accessible mixed-use plan which includes residential uses with commercial and institutional spaces helped in doing that: it reduces the need to seek services outside the neighbourhood, allowing local roots to strengthen. At the same time, zoning that encourages a mix of income levels in the neighbourhood ensures access to development for all. Current master planning does not focus on building such a sense of locality, and there are insufficient public spaces to draw people or allow them to build local relationships, nor are there sufficient schools and amenities within walking distance.

In between the clusters were open spaces known as chowks which contained wells, religious places, or a banyan tree, and served as sites for social gatherings, rituals, celebrations, and dialogues.



Many of the features that we think of today as being passively 'smart' design are found in the mohalla layout.

For more details, there are a number of resources online. See : [https://www.researchgate.net/publication/325566340\\_How\\_mohallas\\_were\\_formed\\_Typology\\_of\\_mohallas\\_from\\_the\\_viewpoint\\_of\\_spatial\\_formation\\_and\\_the\\_urbanisation\\_process\\_in\\_Varanasi\\_India](https://www.researchgate.net/publication/325566340_How_mohallas_were_formed_Typology_of_mohallas_from_the_viewpoint_of_spatial_formation_and_the_urbanisation_process_in_Varanasi_India)

One reason for that dearth of care to the richness of the local may be the lack of ward-level planning. The current planning documents do not reflect grass-roots feedback on the needs of the local community. These can vary by neighbourhood: in existing urbanised areas, community needs may require changes in floor area ratio, in nature of economic activity or service and infrastructure requirements. In contrast, in newly-urbanising wards, community needs and voices will act as a signal of future demands for key planning aspects like economic activity, housing and social and physical infrastructure. The absence of ward plans means that planners do not have a planning output that is closest to communities, which is most flexible and responsive to the changing needs.

However, given the dynamic and evolving nature of the urban landscape in India, it is an established fact that neighbourhoods are both planned and unplanned. These unplanned neighbourhoods are commonly identified as informal settlements and influence city planning, infrastructure layout and provision of facilities.

17.4% of urban households of India live in slums. If looked at certain metro cities, 41.3% of Greater Mumbai's population lives in slums, while 28% in Chennai.<sup>20</sup> So, while planning and designing neighbourhoods for ITCs, we need to pay close attention to both - planned and unplanned neighbourhoods, i.e. informal settlements.

In addition, presence of schools, healthcare, shopping, and work opportunities in distant locations has encouraged a lifestyle pattern where residents travel great distances for basic needs. This further decouples the link to the local.

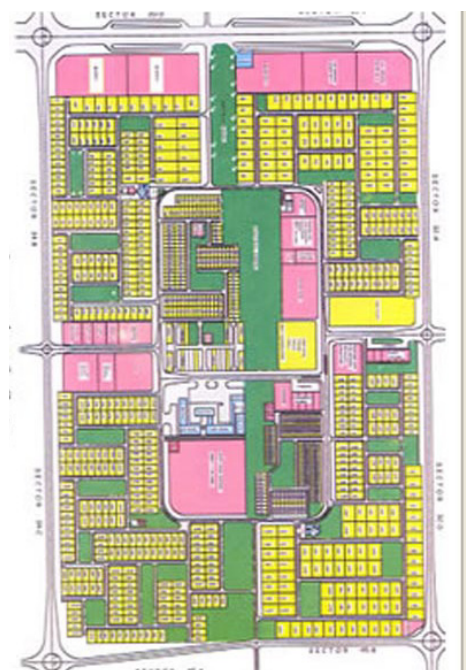


Figure 1.9 'Corbusian' sector plan for Chandigarh - Post Independence sectoral neighbourhood planning

Notes:

- <sup>14</sup> [Healthy Active by Design, Heart Foundation \(2017\)](#)
- <sup>15</sup> Eric Feldman <http://planplaceblog.com/2015/01/20/child-friendly-cities/>
- <sup>16</sup> <http://www.placemakers.com/2014/11/13/berliner-kinder-berlin-and-its-playborhoods/>
- <sup>17</sup> Smart Code 9.2 <https://transect.org/codes.html>
- <sup>18</sup> [URDPFI Guidelines\(vol.1\) 2014, Chapter 8, page 283](#)
- <sup>19</sup> [URDPFI Guidelines 2014, Chapter 5, page 140](#)
- <sup>20</sup> <https://economictimes.indiatimes.com/blogs/policypundit/slums-and-informal-settlements/>



## The Six Major Challenges Neighbourhoods pose to ITC wellbeing

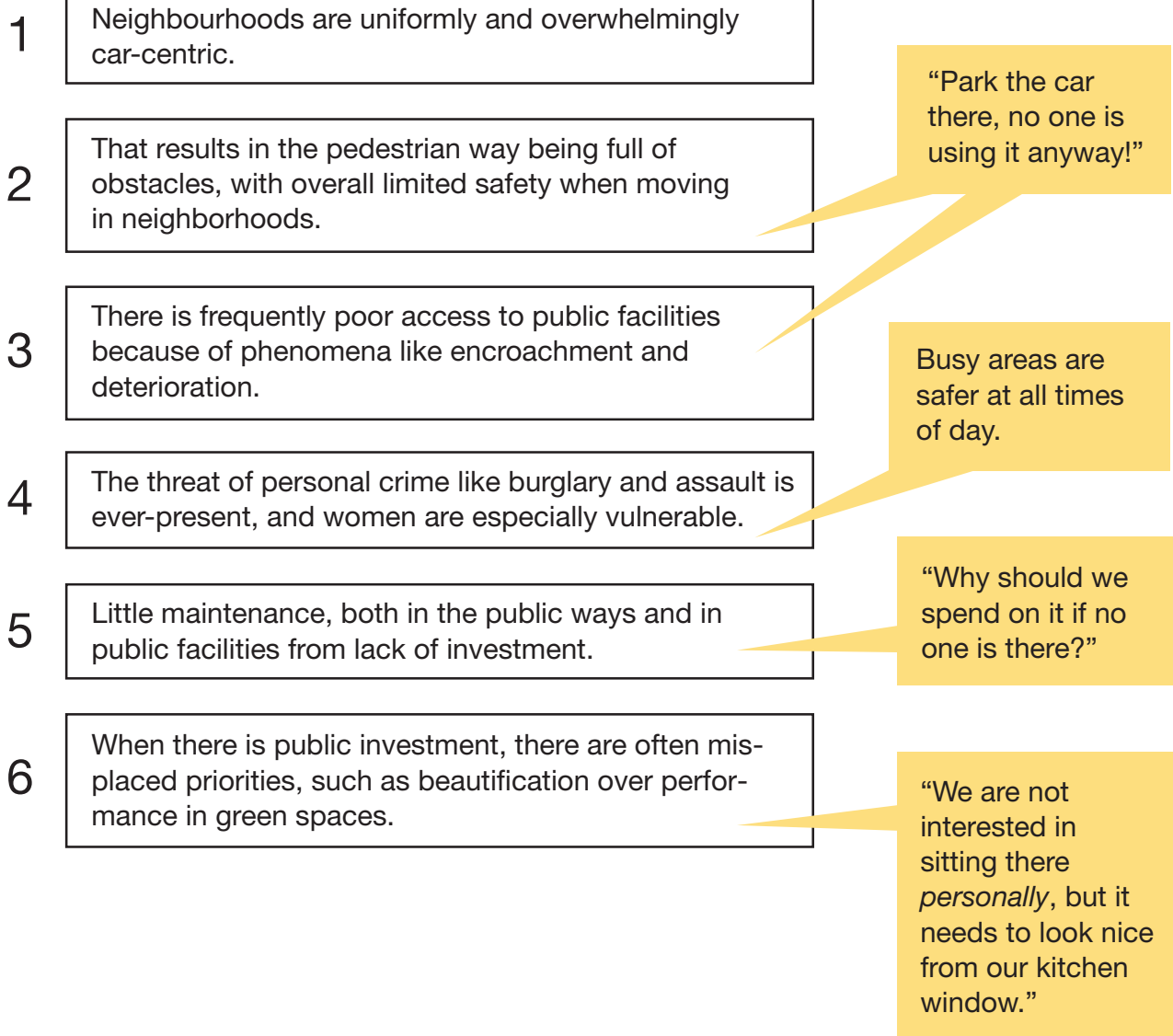


Figure 1.10 Key risks to ITCs health are part of a vicious cycle of attitudes about the public realm, they often start with the car.

03

## Challenges to ITC wellbeing in neighbourhoods today

The challenges affecting neighbourhoods in Indian cities are both global, such as the focus on automobiles over the human scale, and also unique to the Indian context, like maintenance and cleanliness.

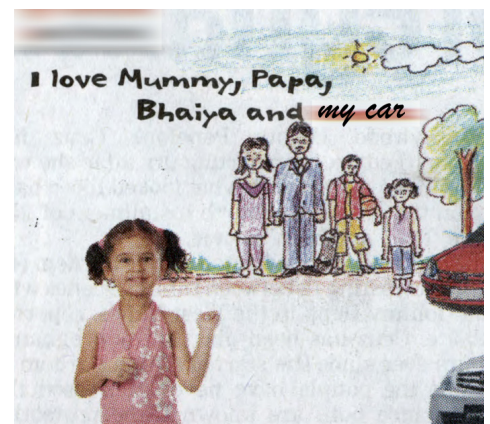
### KEY CHALLENGES

#### CAR-CENTRIC

Car dominance permeates from the city to the neighbourhood level in Indian cities. Indian neighbourhoods do not have planned and enforceable traffic speed regulations. Quite often, due to the high levels of traffic congestion on the main routes, internal neighbourhood streets are used as thoroughfares with cars zipping across residential lanes at high speeds, leading to safety issues and noise pollution. Ad-hoc speed breakers added by RWAs are poorly designed and do little to control traffic speed.

The spaces outside homes immediately lead to a street with traffic movement, with no buffer area between the house and the street. The predominance of cars in the immediate space outside homes is one of the main reasons parents no longer let children move out independently. Doors have to be kept closed, and children are kept indoors in order to keep them from harm. Their natural desire to explore is restricted. In well to do neighbourhoods, even a trip to the local park is undertaken by a car as there are no usable footpaths, and streets are not deemed safe. In more impoverished neighbourhoods, children walking on unsafe streets leads to a high number of road accidents and deaths.

Another issue is the space taken up by car parking. Existing bye laws for homes and car parking provided within plots/ buildings did not factor in the



An Indian advert promoting a leading car demonstrates the way car ownership has permeated the Indian family

The predominance of cars in the immediate space outside homes is one of the main reasons parents no longer let children move out independently.

According to the National Crime Records Bureau (NCRB), almost 43 children die in road accidents across the country each day.<sup>21</sup>

<sup>21</sup> <https://sites.ndtv.com/roadsafety/43-children-die-road-accidents-india-every-day-2546/>

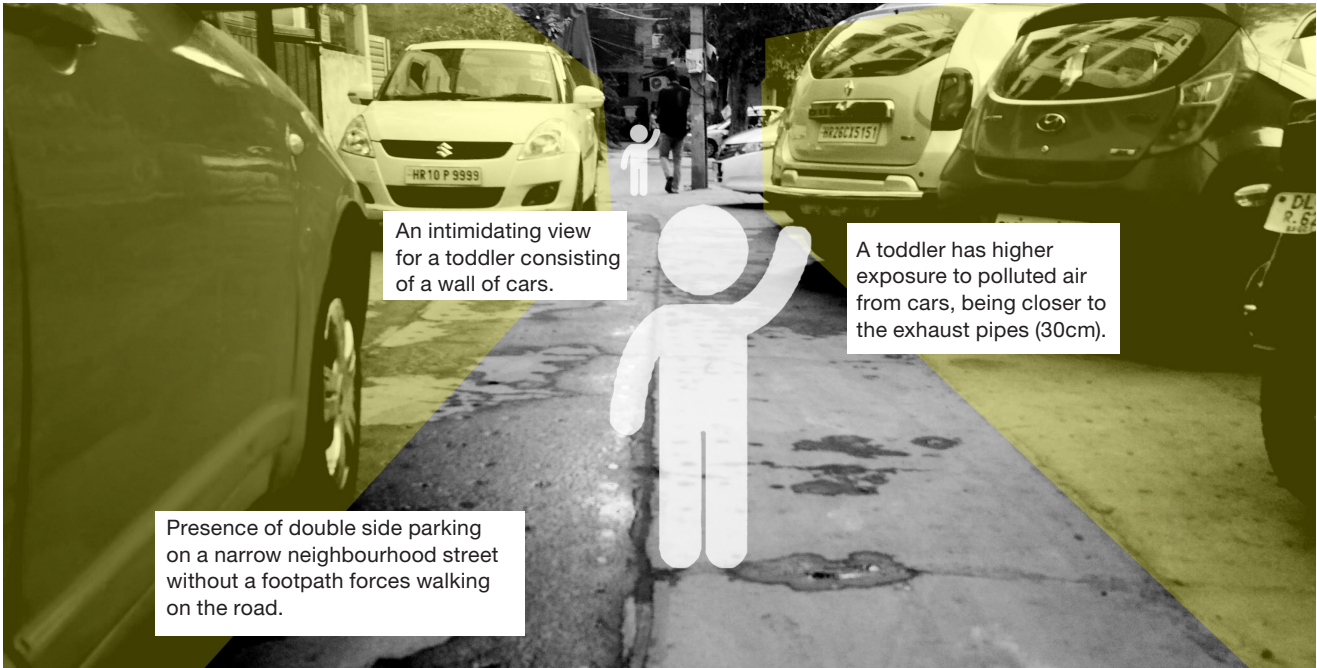


Figure 1.11 Child's perception from a car-centric neighbourhood (Lajpat Nagar, New Delhi)

unprecedented rise in car ownership in Indian cities. Car parking on neighbourhood streets also does not have a cost associated with it. Neighbourhood streets have become congested with cars, and there has been a drastic reduction in designated play areas, parks and open spaces.

A Delhi Development Authority planned neighbourhood at Mandakini Enclave in New Delhi was surveyed to identify the usable open space, now versus the original plan drawn up in 1984. Figure 1.12 across illustrate the loss in usable open space, all of which has been given away to parking.

Another survey of Lajpat Nagar, a neighbourhood in New Delhi revealed that the streets are being used for parking on both sides. There is no footpath, and hence pedestrians, infants, toddlers and their caregivers are forced to walk on the street in between parked cars. Additionally, a young child of an average height of 95cm is unable to see over car rooftops making his/her street experience very different from that of an adult.



Children walk on the road as the space dedicated for footpath (1m) is too little and has been taken over by car parking and entry ramps to homes. Photo of a street in East of Kailash, a neighbourhood in South Delhi

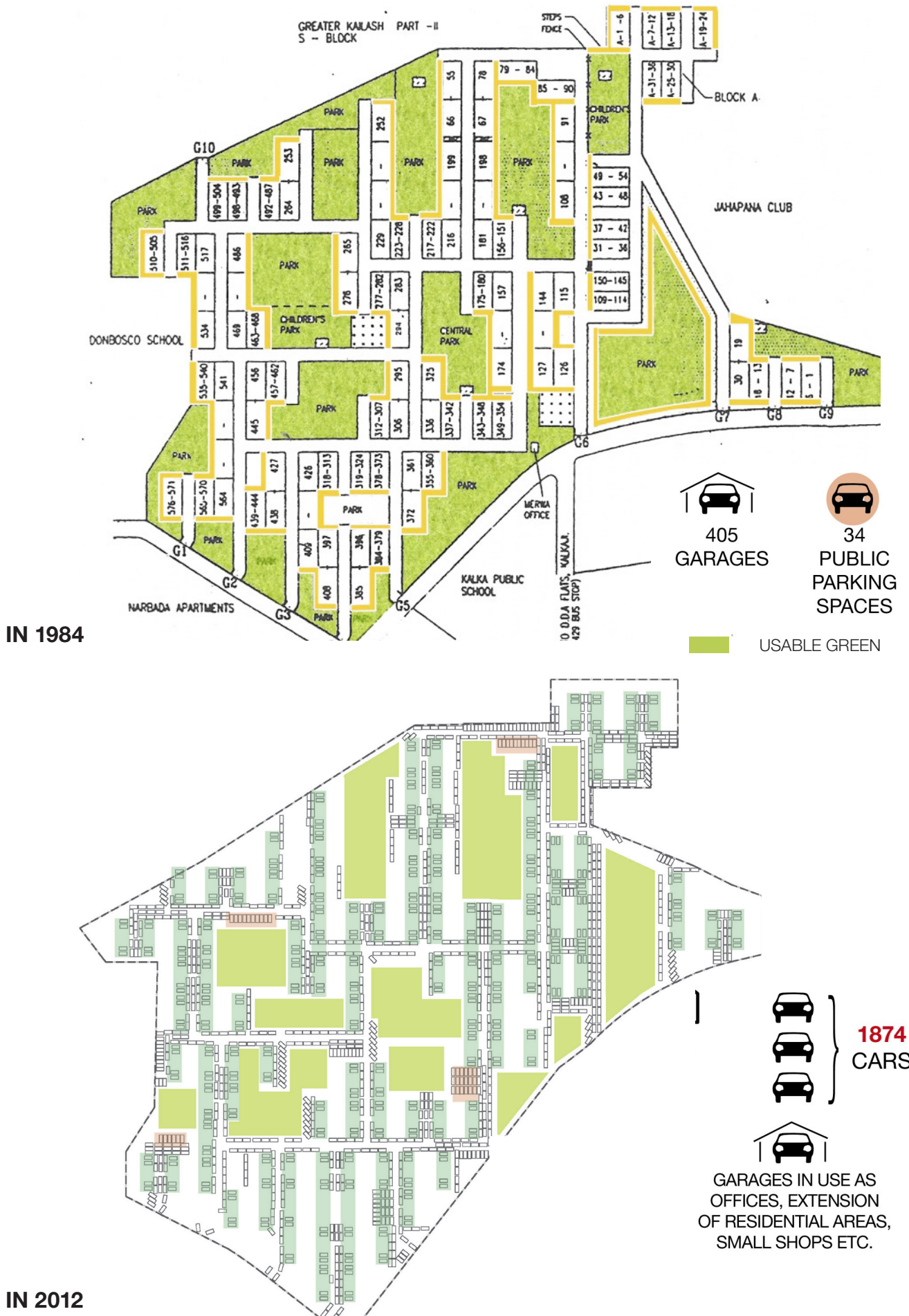


Figure 1.12 Comparison of plans of Mandakini Enclave, a planned colony in South Delhi between 1984 and today



Figure 1.13 Issue of accessibility for ITCs (Mandakini Enclave, New Delhi)

## OBSTACLES AND LACK OF UNIVERSAL DESIGN

The public realm in India is invariably always designed for non-disabled adults, which the very young, the disabled and the elderly find very difficult to navigate. This challenge is particular to Indian neighbourhoods and further augmented by the lack of maintenance of the urban public realm.

Equal access to streets and public spaces will require, at the minimum, footpaths that are clear and free of obstruction, have ramped kerbs for strollers and wheelchairs, barrier-free access, low height kerbstones, along with toilets and other facilities.

**“Cities that have universally accessible street networks and public spaces can improve mobility for everyone, regardless of physical ability or age - pregnant women, parents walking with young children, families walking with strollers carrying young children.”** (Status of Children in Urban India, Baseline Study).<sup>22</sup>

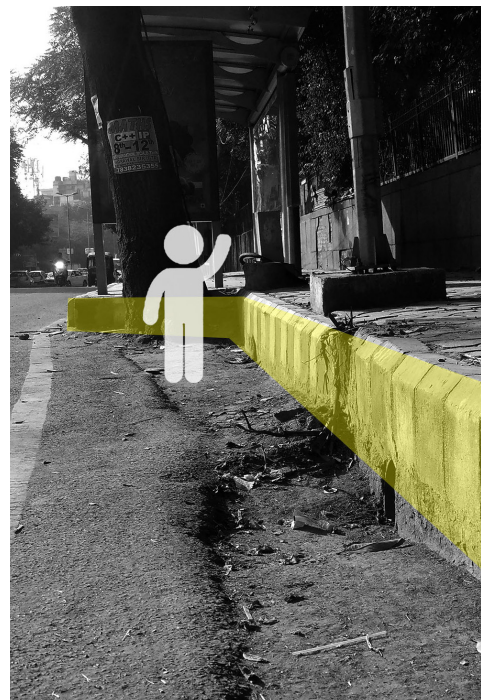


Figure 1.14 Inaccessible public realm for ITCs

The photo above was taken in Mandakini Enclave in New Delhi at an eye level of 95 cm. The height of the kerbstone does not follow design standards, and seems to be have constructed with very little thought.



## POOR ACCESS TO PUBLIC FACILITIES

There is an unequal distribution of urban services, amenities and parks across neighbourhoods in Indian cities. In many neighbourhoods, there aren't adequate services, given the current density of population.

Further, the access to existing services is not cognizant of the walking proximity for infants in strollers and toddlers. Because their range of mobility is far shorter, **families with young children travel slowly (either because they are small or because they're looking at everything)**. It is harder for caregivers to bike or take public transport while juggling children and bags. Ideally, this group should be able to walk to where they need to go, along safe, easy and interesting routes.

In many neighbourhoods, urban parks or schools are beyond the comfortable walking or stroller distance for a toddler and his/her caregiver. In such cases, the child will either be restricted in play and learning opportunities available to him/her, or rely on the car or other such means to access them.

“Safe, walkable and pleasant routes that can access good quality facilities that are within the neighbourhood are missing from our city.”

- Parent, Delhi

Families with young children travel slowly—because their legs are short or because they're looking at everything.

For more details, there are a number of resources online. See :  
[https://3gozaa3xxbpb499ejp30lxc8-wpengine.netdna-ssl.com/wp-content/uploads/2019/01/ST\\_30\\_FINAL\\_.pdf](https://3gozaa3xxbpb499ejp30lxc8-wpengine.netdna-ssl.com/wp-content/uploads/2019/01/ST_30_FINAL_.pdf)



Figure 1.15 Scarcity of safe, dedicated ITC movement zone (Panchsheel Park South, New Delhi)

## SECURITY AND THREAT OF PERSONAL CRIME

Crimes against children and women, the predominant caregivers, are at very high levels in Indian cities. The incidences of crime are on the upward trend, rising as much as 50% in one year.<sup>23</sup> These are a result of systemic issues with our built environment and social and economic disparity across our cities.

Within our neighbourhoods, the dominance of automobiles has resulted in homes and therefore people, turning their back away from the streets. Street lighting has been designed for cars and roads, and not the footpath. Gated communities, high boundary walls, windows double glazed to handle air and noise pollution have left the streets as playgrounds for automobiles rather than children. **The lack of 'eyes on the street' makes streets unsafe for women and children, both in a real and perceived sense.** Our planned neighbourhoods are also designed around monofunctional uses as the above example shows. Traditional Indian neighbourhoods were mixed use in character and it was not uncommon for the street to be the playground for children, looked on by adults meeting up at the local chaiwallah or other such service providers.

The theory of 'Eyes on the Street' by Jane Jacobs advocates the use of high-density mixed-use communities, which are areas with residential and commercial uses, to stimulate street traffic. Increased street traffic, day and night, not only help communities flourish socially and economically, but also acts as self-policing which deters criminal and anti-social behaviour.<sup>24</sup>



Figure 1.16 Inaccessible walking zone (Panchsheel Park South, New Delhi)

## LACK OF MAINTENANCE

Other factors that lead to a lack of safety and security include poor street lighting and ill-maintained and poor quality green spaces, parks, pre-schools and general urban environment. An audit of Indian parks and open spaces revealed that **“parks were often non-functional, abandoned and had become a sought-after place for antisocial activities. Government records of the parks were outdated as parks were often encroached upon, and used as a parking space or a dump.”**<sup>25</sup>

The neighbourhood of Panchsheel Park in New Delhi, when surveyed, revealed that even in upscale neighbourhoods, a majority of the footpaths are not maintained. Figure 1.16 shows a stretch where the footpath is further fenced off, and the surface is uneven and broken.

Most neighbourhoods further face issues with other elements such as stray animals, low hanging electric wires, and so on. All of these elements go towards creating a sense of threat for the very young, making the immediate environment outside their home appear very hostile and inaccessible.

“...There is space available in many of these planned neighbourhoods (DDA) which has the potential to be converted into safe, easily accessible play space for children between 0-5 years...”

- Caregiver, South Delhi

Notes:

<sup>22</sup> [NIUA - Status of Children in Urban India – baseline Study 2016; National Institute of Urban Affairs- page 47](#)

<sup>23</sup> [NIUA - Status of Children in Urban India – baseline Study 2016; National Institute of Urban Affairs- page 47](#)

<sup>24</sup> <http://sppdtdoday.blogspot.com/> referencing “The Death and Life of Great American Cities”, 1961 by Jane Jacobs

<sup>25</sup> [Conference proceedings, Small Children Big Cities, Nov 2014, page 37; presentation highlights by Beena George, Head Liveable City Programme](#)



Figure 1.17 Limited play spaces for toddlers and infants in parks (Lajpat Nagar, New Delhi)

## BEAUTIFICATION INSTEAD OF PLAY

In Indian neighbourhoods, we often see that children don't have enough space to play. There is a prevailing notion that the provision of parks is a waste of a very precious and expensive land resource that could be better put to use for providing homes or roads. Even the parks that do exist are often designed for and occupied by adults and the elderly.

As outlined earlier, play, both spontaneous and organised, is critical in the development of young children. That this is not recognised or appreciated is evident when looking at parks in Indian neighbourhoods. There is a focus on providing beautifully manicured spaces with some token swings and slides. There is little emphasis on outdoor play for children under five due to the high priority placed on safety and protection. As a result, play spaces are either for older children playing ball games or neglected vacant lots. These also tend to be more frequently used by boys rather than girls. There is a lack of facilities for both children and caregivers, even amenities such as basic toilets and water, in neighbourhoods.

“...High emphasis on beautification of open areas which necessarily involves keeping footfalls low or restricted...No system to maintain play areas unless there is a maintenance budget and named owners...”

- Parent, Delhi

For more details, there are a number of resources online. See : <http://msuextension.org/publications/home-healthandfamily/mt201003hr.pdf>



## DIRECT EXPOSURE TO AIR AND NOISE POLLUTION

More than one in every four deaths of children under five years is directly or indirectly related to environmental risks. Air pollution and excessive noise are the major stressors in the urban environment, having major health implications. 93% of children population lives in the areas having pollution levels more than WHO standards<sup>26</sup>.

Children are at greater risk than adults, considering many adverse health effects of exposure to pollution, owing to a combination of behavioral, environmental and physiological factors.

Children are always closer to the ground, where pollutants reach peak concentrations, rendering them more susceptible and vulnerable to the ill-effects of poor air quality.

They breathe faster than adults, taking in more air and, with it, more pollutants. Newborn and infants, spend most of their time indoors, where they are more susceptible to household air pollution. When young, their bodies, and

especially their lungs, are rapidly developing and therefore more vulnerable to inflammation and other damage caused by pollutants. In the womb, children are vulnerable to their mothers' exposure to pollutants. Exposure before conception can also impose latent risks.

In India, in 2017, 1,95,546 children lost their lives due to air pollution-related diseases. Lower respiratory tract infection (LRI) caused by exposure to air pollutants was recorded as the second major reason for child mortality. Of the total, LRI claimed lives of 1,85,422 children aged between 0 and 5<sup>27</sup>.

High ambient noise exposure may result in hearing impairment, the toxicity being dose-dependent. Harmful effects of noise in children may start from the intrauterine period. In variance with adults, neonates and young children are passive consumers of harmful noise, and are more susceptible to its damaging effects.

<sup>26</sup> Air pollution and child health, Prescribing clean air, Summary, Geneva, World Health Organization, 2018

<sup>27</sup> <https://www.downtoearth.org.in/news/air/air-pollution-kills-a-child-every-3-minutes-in-india-67258>



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## INFORMAL SETTLEMENTS

### VULNERABILITIES AND CHALLENGES

As per Census of India 2011, 18.7% of urban young children (0-6 years) live in urban slums or informal settlements. Such informal settlements have always co-existed with planned neighbourhoods in Indian cities. Therefore, it is important to consider informal settlements as an integral part of the ITCN approach.

Services in cities, such as water, sanitation and electricity are basic and critical services, as they ensure a clean and healthy environment essential for the holistic growth and development of young children (0-5) and their caregivers. The current poor conditions of urban services in informal settlements worsen in times of environmental distress and global health pandemics, thus, impacting the most vulnerable groups.

When viewed from the resilience lens, it is essential to include in urban planning and design, the basic needs and services of marginalised groups living in environmentally derelict, dilapidated and vulnerable

settlements. Addressing these existing challenges in informal settlements is of prime importance, so that vulnerable groups are better prepared to withstand and cope with environmental and geo-political shocks and stresses. Thus, setting up a foundation for resilient communities and neighbourhoods for all, especially, for infants, toddlers and their caregivers.

An indicative list (though not exhaustive) of commonly faced challenges in informal settlements caused by natural and human-made hazards is listed below:

- Exposure to hazards and poor environmental quality – Location of informal settlements pose the highest threat to young children as they are generally located in high-hazard areas such as dumping grounds, riverbeds and other high-risk areas. Poor environment due to pollution and unhygienic surroundings add to the hazardous living.
- Poor quality housing – Young children in informal settlements live in poor quality housing, which constantly puts them at health and life risks.



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- Health-related issues – Social norms and cultural practices continue to influence the lack of awareness around issues related to health, sanitation and hygiene in informal settlements. This lack of awareness contributes to limited access of child-oriented health services such as health and hygiene, nutrition, vaccinations, and disease prevention.
- Lack of infrastructure – Young children and caregivers are continually threatened by the lack of infrastructure related to (a) sanitation including, lack of clean toilets, toilets with water, well-lit toilets and toilets with closed doors, (b) open spaces for children to play and spend time with their friends, and (c) well-lit streets during dark hours of the day and night.
- Lack of stimulating experiences – The daily experiences of young children and caregivers are deprived of playful, engaging built environment that stimulates their growth and enables interactions. Access to play opportunities, public spaces, and interactive elements can have a positive effect on their mental and cognitive development.
- Poor access to ITC related services – These settlements are long deprived of fully-functioning ITC-related services that are crucial for young children such as Anganwadi Centres (AWCs), Primary health Centres (PHCs) and maternity nursing homes.
- Low engagement in decision making in urban planning - Informal communities are typically not included in urban planning related decisions, particularly around ITC-related issues that impact young children directly.

Since informal settlements form an integral part of Indian cities, voices of these marginalised groups need to be heard to ensure creating ITC-friendly neighbourhoods.

## DATA-DRIVEN APPROACH AT CITY LEVEL

### SPATIAL ANALYSIS FRAMEWORK AT CITY LEVEL

In order to have an understanding of children-oriented urban issues, sectoral and spatial understanding is essential to disaggregate at the settlement level. Therefore, it is important to spatially analyse their issues, correlate all aspects and ensure a cohesive approach. Cities generally ensure provision of infrastructure, services, and amenities but these may be inaccessible to ITCs due to multiple local issues, thus, creating a gap between provision and actual use. In this section, a deeper-level spatial analysis of all ITC-related services and amenities incorporating the ITCN framework is presented, to identify the gaps for improvements.

The spatial analysis framework can be used for understanding the service distribution pattern, the usage pattern, the network and extent of services, and imbalances, if any. This type of analysis goes beyond the typical provision-level analysis and provides an in-depth understanding of all services with respect to their locations and the serving population. Further, this helps to identify priority areas with ITCs that need immediate attention. Spatial mapping of multiple aspects related to ITCs such as population, characteristics, amenities and network will highlight areas that have poor access to these services and ITC-related infrastructure. For example, Anganwadi Centres in the city should be spatially mapped along with public transit routes and stops to understand gaps in accessing these centres using public transit.

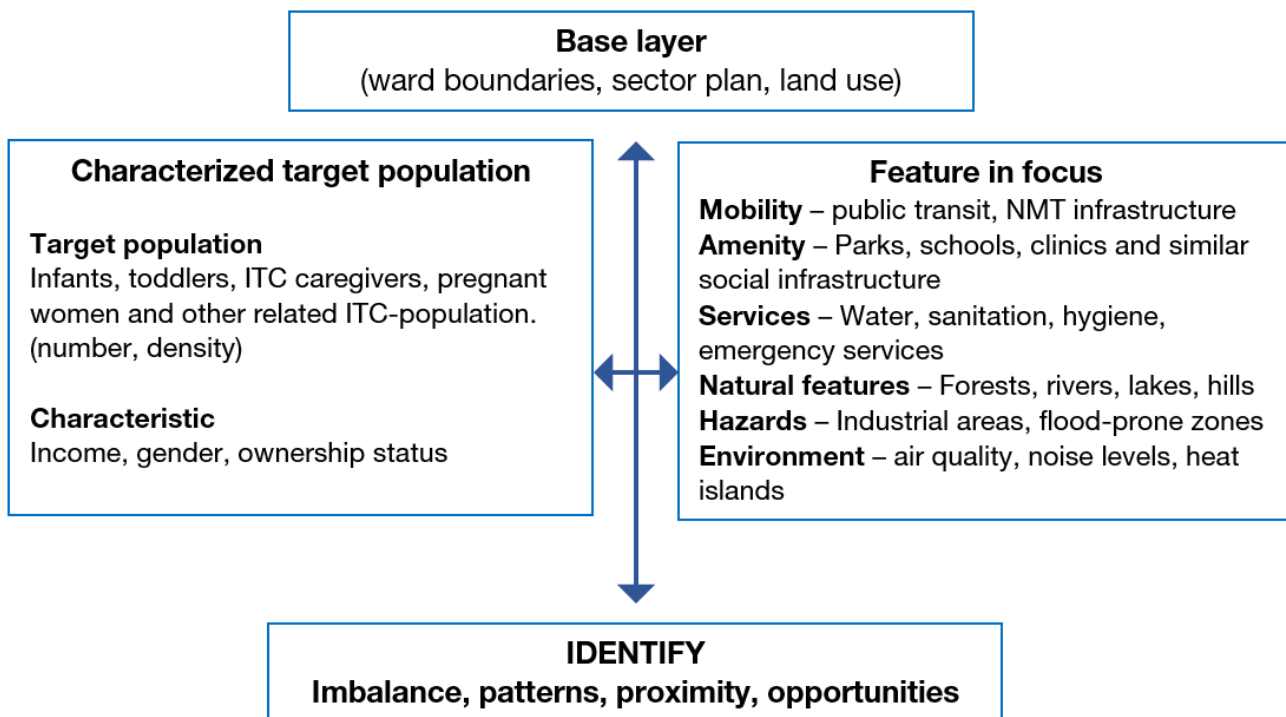


Figure 1.18 Process for spatial analysis at city level

Source: WRI India

## IDENTIFICATION OF INFORMAL SETTLEMENTS AT CITY LEVEL

In Indian neighbourhoods, gaps can often be found in the level of services. Cities may have clusters of formal and informal settlements in the same neighbourhood but the level of services or provision of amenities varies vastly among these settlements. This contrast creates a barrier in informal settlements where young children lack access to basic infrastructure, safety, amenities and facilities that are essential to their holistic development. Hence, there is a strong need to address informal settlements in city level analysis while applying the ITCN approach, so that city administrators can plan cities in a sustainable and resilient manner.

In the spatial analysis framework, certain aspects should be mapped to ensure the inclusion of ITCs in informal settlements, including basic infrastructure, safety and accessibility that is available to them.

A few challenges that typically exist within informal settlements in India are listed below:

- Engagement of local government with the community to address infrastructure and service related issues is low.
- Policies and regulatory barriers prevent interventions in informal settlements.
- Land title issues prevent further investment as well as availing of funds.
- Political disparities persist amongst local governments and community groups.
- Existing gender dynamics, which typically favour men as the decision makers and deprive women from civic and public participation.
- Usable open spaces are occupied by other interest groups for parking, storing goods, and as dump yards.

A few beginner-level strategies to overcome these challenges within informal settlements, are listed below:

- Multi-stakeholder involvement, including government agencies at the inception stage
- Quick wins to gain momentum
- Identify the local community champions for civic engagements
- Employing a participatory lens to all projects
- Identifying issues and most viable solutions based on experience
- Shared ownership of projects with the community and NGOs

## FRAMEWORK FOR SETTLEMENT IDENTIFICATION

In order to include informal settlements in city-level analysis, a specific framework that considers the characteristics of these settlements, has been developed. This framework provides guidance to cities for all stages, which are: Assess, Develop, Review, and Improve. It starts from settlement identification, conducting various analyses within settlements, and finally, developing specific solutions.

This framework at the city level will help understand uniformity, imbalance, and gaps within ITC-related services and amenities, while keeping in mind certain characteristics of settlements, such as population density, land status, and hazards. These characteristics become crucial to map as they specifically highlight vulnerabilities and/or gaps in basic provisions. By using this framework, cities can align their focus with the areas needing the most immediate attention.

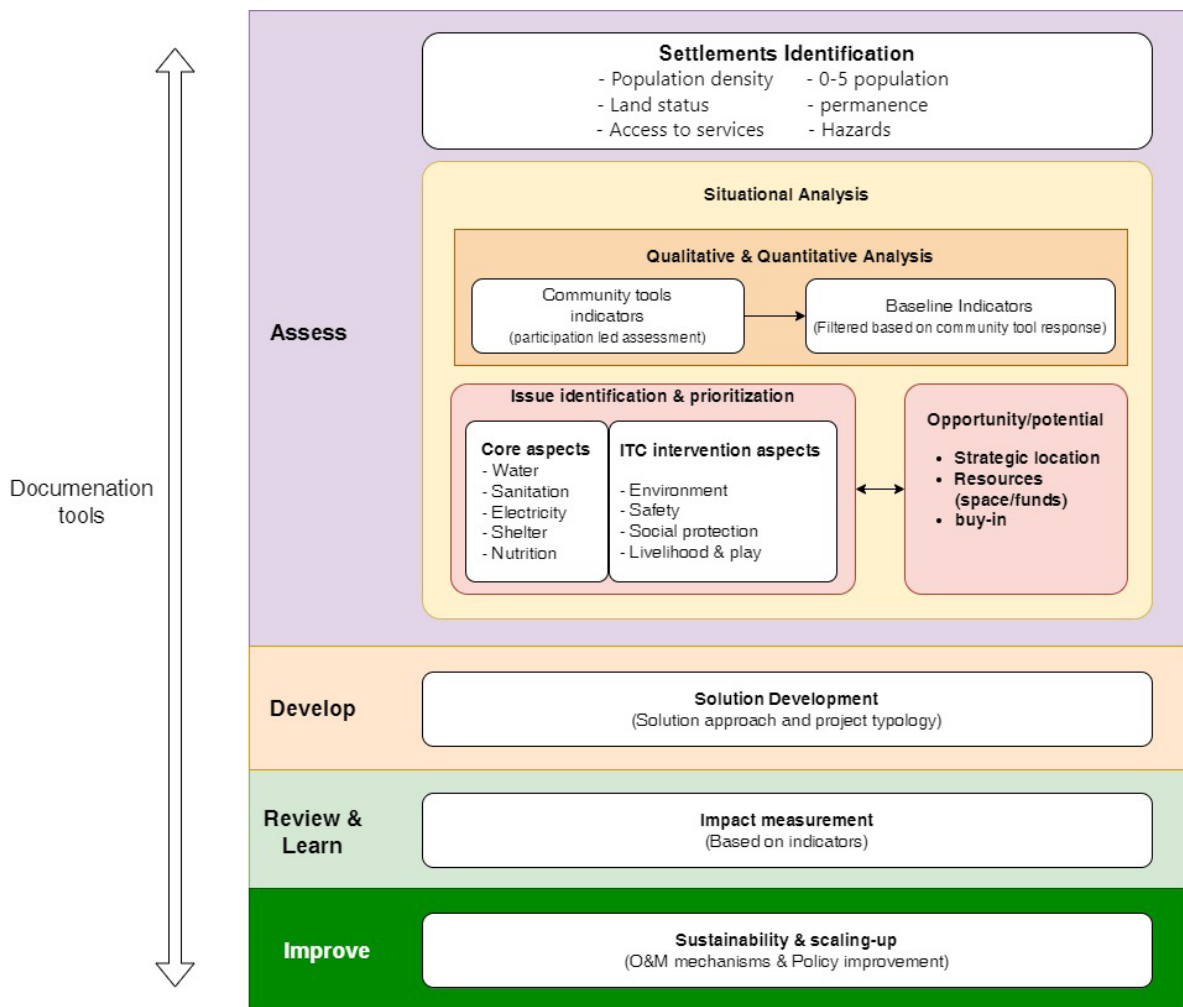


Figure 1.19 Overall framework for intervening in Informal Settlements

Source: WRI India

For more details on community-led assessment indicators, see Children's Environments Research Group's (CERG) Child Friendly Places (CFP) methodology.

Each stage of this framework is briefly explained below:

- **Settlement identification**

A city-level process for settlement identification ensures inclusion of specific characteristics of informal settlements such as land status, permanence, hazards, access to basic services, and other such vulnerabilities with respect to 0-5-year-old children.

- **Situational analysis (qualitative and quantitative)**

This analysis has two components. The first comprises of a participatory community engagement tool, which includes the voices of children, adolescents, young people, community members, and service providers in decision-making at the local and city levels. The second component are the baseline indicators that support the quantitative analysis. These two components together would help analyse settlements from lens of both city agencies as well as the community.

- **Issue identification and prioritisation**

When dealing with formal and informal areas together, it is important to identify issues at two levels – core and supportive. Core issues comprise of basic services such as water, sanitation, safe housing, and nutrition; while supportive issues address social constraints, livelihood and play, the surrounding environment, and protection.

At this stage, it is crucial to bring city officials and local communities together so that the identified issues can be prioritised as per the on-ground requirements.

- **Opportunities**

The existing opportunities within the settlement need to be mapped, so that these can help in developing solutions. At this stage, it is necessary and useful to identify the potential scope or strategies with respect to location, resources, and local buy-ins.

- **Solution development**

Based on prioritised issues and available opportunities, interventions should be planned using a participatory approach. Interventions could adopt any of the 5R approaches in the framework – Reinvent, Reorganise, Reuse, Retrofit, and Rekindle – for any of the project typologies, such as open spaces, infrastructure and amenities, capacity building and community mapping.

- **Impact measurement**

Studying the impact of implemented solutions is a key to understand the scope of improvement and ways to scale up. Refer to ITCN 2.0 Evaluation and Monitoring Metrics for indicators used to evaluate impact.

- **Sustainability and scaling-up**

It is important to form a mechanism within local communities for sustainability of the solutions. Simultaneously, successful solutions should be scaled up across the city.

- **Periodic assessment**

Periodic assessment of settlements should be carried out at the city level to track progress and plan the next priority areas for interventions.

The ITCN 2.0 Design Guidelines provides further details on to how cities might use this framework to develop infant, toddler and caregiver centric development in informal settlements.

For more details on community-led assessment indicators, see Children's Environments Research Group's (CERG) Child Friendly Places (CFP) methodology



K.T. V. BOOK



Figure 1.20 Objective of the ITC Neighbourhood

## Vision for an ITC Neighbourhood

In an ideal neighbourhood, infants and toddlers and their caregivers feel **safe** and encouraged with the **freedom** to run, explore, play and engage with their built and natural environment.

The streets and parks in the neighbourhood are safe from cars, strays and predators. Neighbours and other familiar and **trusted service providers**, often found in Indian streets, engage and keep a look out for the child adding to a sense of security. Parents feel at ease that their children are safe outdoors.

The neighbourhood is **calm and quiet**. It is verdant, overflowing with **green**. Where there are no trees, **shade** structures keep the walls of buildings and the street cool on a hot day. This neighbourhood is densely populated with simple, **well-managed services** that are easy to get to, and are **evenly spread** across the whole neighbourhood, so that no one is cut off to them or by them.

The routes between homes and key destinations are safe, **walkable**, and full of **excitement** and **wonder**.

Parks are **maintained**, well used and clean, and full of **playful** encounters. Parks are inclusive and facilitate interaction across **generations and communities**.

Parents and caregivers of infants and toddlers understand and practice behaviours that promote the holistic development of young children, in and around the public spaces and facilities in their neighbourhood. Service providers understand their role and responsibilities towards infants, toddlers and their caregivers and are trained regularly to provide quality ECD services. They report and address any challenges that the ITCs face in accessing their respective facilities.



## FIVE OBJECTIVES FOR AN ITC NEIGHBOURHOOD

A neighbourhood can provide a backdrop of imagination and adventure that nurtures and draws out the intuitive, creative lives of children.

There are many qualities that a neighbourhood must have for children to thrive mentally and physically. These can be achieved in different ways, through different combinations of elements. The objectives and the outcomes that the vision seeks to bring about, will be identical for all the 100 Indian Smart Cities. If the design guidelines are the tactics, the objectives provide the strategy.

These objectives and the corresponding design guidelines found in Document 3 will provide a road map for the city managers to create healthy, stimulating, and desirable neighbourhoods for everyone, by fulfilling the needs of ITCs.

The following five objectives operate in a dynamic interplay and cannot be implemented à la carte. A great playground is only as good as the quality and contiguity of the street network that leads us there — the two must work together. But that is not to say that there is no hierarchy between the objectives. Beginning at the foundation of ‘safety’ objective, empowers the city managers to make decisions about where to start.



[Click here for Young Explorers videos \(USA\)](#)



- Safe to walk while daydreaming/ mentally distracted
- Structured, demarcated, space is assigned
- Eyes on the street, trust of neighbors
- Slow
- Respectful of privacy

## SAFE

A safe and secure neighbourhood is thoroughly walkable by mothers and caregivers holding and guiding young children with minimal stress from the road. If walking is scary and frustrating, prohibiting interaction with people and producing stress, then one is not safe. There may not be a feeling of acute pain or loss of property, but the body is still being harmed. A typical Indian neighbourhood has been retrofitted countless times with safety and security measures, mainly to limit crime. However, the passive threats posed by bad streets affect far more people negatively. So the critical choices facing planners thinking about the safety and security of babies and families is: 'safe and secure against what?'

The objective of safety and security is all about re-focusing priorities towards walkability. A walkable street is a slow street, with clear demarcation for different kinds of use. It is a street with limited or slow vehicular access, where the pedestrian takes priority. Incase of streets that have multiple uses, safe walkability

must include dedicated footpaths that is protected with a buffer from the vehicular traffic. Indian planned neighbourhoods feature elements like gates to control movement. But these limit vehicular traffic only to some extent and shift the problem elsewhere. Streets need elements of control that ease movement for both cars and pedestrians, not stop it.

It is critical for city managers to reassess the functionality of the elements that streets contain, according to the needs of caregivers and babies.

Safety is also about elements that keep the public realm visible, so it is critical to ensure good lighting designed for pedestrians. Whenever possible, streets should have amenities with active ground floor uses, such that there are plenty of eyes on the street. 'Smart' measures for safety like cameras in the public realm need to be carefully placed to respect the privacy of citizens as well.

Young children thrive in safe spaces that give them freedom to explore, play, and learn. Urban spaces should be designed to limit exposure to various hazards and risks, such as high vehicular speeds, high pollution levels, heat islands, waste material, electrocution, and stagnant water. Safe spaces entail designing for all ages and gender sensitive infrastructure.

Urban systems, both man-made and natural, which include roads, social infrastructure, and ecological areas, usually have clear stakeholder stewardship arrangements. Working together, these stakeholders can potentially play a role in preventing system failures. In times of stress, it is essential that our systems withhold the shock and ensure safe failure. This is related to its ability to absorb shocks.

Household- and community-level

preparedness for disasters tends to be universally low, and children, and households with children, tend to be particularly vulnerable to the adverse effects of disaster exposure. To determine effective measures and boost the preparedness level of ITCs it is essential to assess the gendered and common risks associated with the places they live, learn, and play in, and designing safe solutions. Other activities include educating communities, authorities, and children about risks.

The ITCN 2.0 Design Guidelines provides detailed guidelines on how various ITC-centric destinations can be developed to be Safe for infants, toddlers and caregivers. The ITCN 2.0 Evaluation and Monitoring Metrics can support cities with indicators to monitor the same.



© Save the Children Indonesia



© pixabay



- Comfortable and protected from the elements
- Quiet
- Bio-diverse
- Renewable and non-carbon energy sources
- Future-oriented, green technologies

## GREEN

A green neighbourhood provides climactic protection and comfort for residents throughout the day and night, and through all seasons.

Such a neighbourhood is quiet, with strong measures in place to limit noise from traffic and construction. The streets are tree-lined which can help to keep stress levels low. It must be made clear that the needs of ITCs include a calm and even soundscape, especially during certain hours, both from outside and inside the home.

The neighbourhood is bio-diverse, an excellent host to native plants, animals, insects and birds. The neighbourhood provides ample opportunities for children to engage with natural materials for play. It is where children first come into contact with their natural world.

When planning ITC interventions in neighbourhoods, try to pinpoint projects

that fulfil multiple objective simultaneously. Green infrastructure like a flood control berm is permeable to absorb rain. It's also fun and challenging to play on, for younger children, if free of trash and debris. The objective of such a neighbourhood is that it adds a performative, infrastructural dimension to natural objects, spaces, and experiences that are also playable.

A green neighbourhood also falls within a Low-emission zone (LEZ) where infants and toddlers can breathe fresh air and are not exposed to poor air quality. A green neighbourhood has adopted renewable energy harvesting and distribution technologies. All public amenities as well as street lighting are powered with renewable energy. Homeowners and private businesses are incentivised to switch to renewables through subsidies offered to members of the ITCN.



Resilience for young children and their caregivers aims to integrate climate knowledge and age sensitive environmental risks, both occurring on a daily basis and in times of hazards, through design and policy level interventions.

As more and more urban areas are facing climate risk and threats to human comfort, the design of such spaces needs sustainable revival, focused on adapting to and mitigating climate change.

Thus, urban spaces that leverage green and blue infrastructure, use the potential of green (such as trees, parks, gardens, playgrounds, and forests) and blue (seas, rivers, lakes, wetlands, and water utilities) spaces to plan mitigation strategies, and add more open infrastructure for ITCs, are very important and serve long-term benefits.

Nature-based solutions and hybrid solutions weave natural features and processes into a community's landscape through planning, design, and engineering practices. These

promote resilience and adaptation while being integrated into a community's built environment (such as, a stormwater park) or its natural areas (such as, land conservation). Such solutions can prove effective towards combating climate change, reducing flood risks, improving water quality, protecting coastal property, restoring and protecting wetlands, stabilising shorelines, reducing urban heat, and adding recreational space.

Planning and building cost-effective nature-based and hybrid solutions requires collaboration and multi-stakeholder support while carrying out the planning and execution.

The ITCN 2.0 Design Guidelines provides detailed guidelines on how various ITC-centric destinations can be developed to be Green for infants, toddlers and caregivers. The ITCN 2.0 Evaluation and Monitoring Metrics can support cities with indicators to monitor the same.



- Legible
- Flexible
- Free of physical and virtual obstacles
- Clusters of services/convenient
- Predictable and dependable, well-communicated services

## ACCESSIBLE

One of the most important and compelling features of Indian neighbourhood-level planning norms is the provision of public facilities according to the population. Making sure that ITCs have convenient access to the goods and services that they need within a 5-10 minute walk from their home gives a caregiver one good reason not to use a car. The household worker ironically spends an inordinate amount of time in the city buying the things that are required to keep the household running. Their 'mobility chain' contains many short stops. The less the distance between each one, the less time required to accomplish the task, translating to lower stress levels and better physical and mental health.

Reducing short trips in the car is one of the most important outcome that effective neighbourhood-level zoning will deliver. In other words, 'clustering of destinations' to the greatest extent possible is key. Clustering has positive impacts on the rest of the city outside the neighbourhood as well, since there is one

less car on the road, one less car parked on the street during the errand.

Making sure that those facilities are legible and easy to find within the city by everyone, and that the services they offer are on predictable schedules, and can be depended upon is a key aspect of a neighbourhood's accessibility.

Accessibility has overlaps with the objective of Safety because they both occur within the realm of mobility. Beyond clustering, it is critical that ITCs are able to access all parts of a neighbourhood easily and conveniently.

This has bearing on things like level changes in the city's public realm. Make sure to pay attention to details when designing a universally accessible public realm. Height of footpaths should be suitable for young children and should be provided with ramps in case of level changes. Low height seating which allow young children to climb and sit independently, to be added. Ensure transit modes and stations



such as buses and trains, bus depots and train stations are stroller friendly. All of these measures will make a huge difference in comfort and accessibility.

Accessibility is also related to the threat of stray animals and to making sure that there is a strategy in place for keeping their waste out of the public realm, with a robust maintenance budget.

Flexible services can offer huge convenience to ITCs. Flexibility means everything from itinerant vegetable carts that already exist in most neighbourhoods, to pop-up and temporary neighbourhood events. These can be events such as temporary street closures (to vehicles), weekend markets, and other such events that can facilitate neighbourly interactions. Flexible programming should be well communicated and legible.

Availability, accessibility, and affordability of both physical and social infrastructure is fundamental for people to sustain in a neighbourhood, especially during times of disasters. These infrastructure should be able withstand long-term and short-term shocks and be responsive and stable in day to day and during the disaster.

Good health and education infrastructure is expected to ensure the physical and mental well-being of ITCs. Early Childhood Development (ECD) institutions can play a key role in creating awareness and ensuring preparedness before disasters and can pose as anchors of relief work during stressful times. Health and education infrastructure also plays the vital role of temporary shelters and rescue points for the government to operate in disaster situations.

Besides infrastructure, it is important to connect, establish and foster network support systems with the local communities and organisations such as RWAs, NGOs, etc. The network of people helps in reaching and identifying the most vulnerable. They also help the government in collecting data and in ensuring resource efficiency.

Risk perception plays a significant role in disaster risk management, it is important for the community to understand specific risks, especially age-specific risks. It is imperative to integrate disaster risk reduction with city regulations, making it an integral part of local development.

The emergency response mechanism strengthens adaptive capacity in times of

shock. Knowledge and training in emergency and disaster preparedness are important in responding effectively. As young children are dependent on their caregivers for support and assistance in times of extreme events, training and knowledge dissemination among the caregivers become quintessential. Children need to be able to access emergency services when their community and family life is disrupted, and their support network is removed. It is imperative to provide risk reduction education in schools and in the community, develop safe evacuation plans, establish temporary gender-sensitive structures, and support urban search and rescue services during disasters.

The ITCN 2.0 Design Guidelines provides detailed guidelines on how various ITC-centric destinations can be developed to be Accessible for infants, toddlers and caregivers. The ITCN 2.0 Evaluation and Monitoring Metrics can support cities with indicators to monitor the same.



- Attention focusing (not grabbing)
- Enveloping and protecting from distraction
- Challenging
- Committed to art
- Authored by and memorialising of the childhoods belonging to it

## PLAYFUL

Play is more than entertainment for children, it is physical and emotional learning, therefore essential for children's wellbeing. A neighbourhood that wishes to support the healthy development of children must be one where children can be playful virtually everywhere, and parents should feel safe and secure about it. On a walk to the neighbourhood shop, a child could find safe and stimulating ways to interact with every corner and nook without fear.

Make sure that there are ways to access nature within the neighbourhood. Studies show repeatedly that proximity to and interaction with organic materials like sticks and rocks, sand and dirt dramatically open up creativity, sense of calm, and agency in the world much more than toys do. This kind of unstructured play, which is also in direct contrast to the structure that play schools provide, is much more likely to be challenging, can handle repetition and be more developmentally useful to young children. In comparison, children

tend to lose interest in structured playground equipment, which have limited uses.

In parks and public spaces, use simple structures which can be used for seating and also allow for adventure and challenge. This can be a log bridging two berms or multiple-level seating. In parks, provide plenty of seating and not necessarily all facing each other.

Public art as play also provides the opportunity for children to engage with the built environment. Cities today are inundated with images and messages through public art as decoration which clutters visual experience. Take public art seriously. Neighbourhood associations or other small scale institutions could commission art organisations to enter neighbourhoods and oversee the systematic installation of playable, imaginative, long lasting or short term art work that improves the visual and tactile landscape of a neighbourhood for everyone. Commission sculptors to make baby playground and shade structure interventions.



Give children a sense of authorship (not ownership) over play spaces. These can be temporary or permanent and leave a child with the sense of “I helped to create this place, it has a mark from me and it belongs to everyone.”<sup>28</sup>

Notes:

<sup>28</sup> <https://www.psychologytoday.com/us/blog/freedom-learn/201404/risky-play-why-children-love-it-and-need-it>

For more details, there are a number of resources online. See :

<https://www.ornes.nl/wp-content/uploads/2010/08/Play-in-children-s-development-health-and-well-being-feb-2012.pdf>

Click here: Lectures from the Urban Play-scapes Conference in Istanbul

Dealing with the effects of disaster or undergoing stress can be very challenging for a child who doesn't have enough opportunity to play either at home or outside. Long-term impacts of disasters on children may leave them feeling isolated and alleviate the trauma.

Play being an important way in which young children gain essential knowledge and skills, it can pose as an effective strategy to cope and recover. Access to play opportunities and environments that promote play, exploration, and hands-on learning throughout the year and in times of stress becomes essential.

With the growing stress of climate change on urban spaces, resulting in higher temperatures and pollution levels, play spaces need to be designed as all-weather play spaces. Green and open spaces should be planned and designed to withstand stress and continue to function in all types of weather as well as during disasters.

Open spaces are key to enhance the resilience of neighbourhoods. Therefore, play areas need to be made resilient by prioritising green infrastructure, shaded seating and playing areas, and play equipment made with natural material. Nature-based infrastructure

is a resilient approach towards managing stormwater runoff, reducing flooding, heat island effects, and direct exposure to pollution in play spaces.

Playing in challenging weather, and in natural environments provides scope for increased positivity, creativity, and adaptability, especially for young children.

The increasing weather anomaly imposes extreme stress in caregivers as well, impacting their ability to engage in responsive caregiving when in open and play spaces, highlighting the need for inter-generational play spaces. There should be additional emphasis on providing opportunities for caregiver play and recreation in public spaces.

The ITCN 2.0 Design Guidelines provides detailed guidelines on how various ITC-centric destinations can be developed to be Playful for infants, toddlers and caregivers. The ITCN 2.0 Evaluation and Monitoring Metrics can support cities with indicators to monitor the same.



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- Listening and responding to needs of residents
- Even and thorough implementation of interventions
- Transparent processes
- Fair to all, not just 'owners'
- Objective, informed by data

## INCLUSIVE

In an inclusive neighbourhood, every intervention for safety, green balance, playfulness, and accessibility, are applied in a balanced impartial way, across the entire neighbourhood. This objective focuses on taking implementation seriously. An inclusive neighbourhood is thoroughly and consistently supportive to everyone who lives in it. It is a neighbourhood whose structures of decision making and allocation are fair and transparent.

One of the most important aspects of making sure our neighbourhoods are just, is to guarantee that public facilities and the public realm serve everyone equally. The child who lives far from the park and near a noisy road, even in the same neighbourhood, will have lower developmental indicators than the one who lives in the more supportive area of the neighbourhood. No two streets are the same, nor are any two parks. The ITCN approach must strive to guarantee an even quality across the entire zone, which doesn't necessarily

mean equal spending.

For this objective, data collection and analysis is key to monitor progress and understand where gaps exist. An inclusive neighbourhood uses 'smart' practices and procedures to ensure quality. These practices are eminently transparent to the public, and provide opportunity for engagement and feedback, and may be updated when improvement is needed.

Indian neighbourhoods are home not just to home and business owners, but a spectrum of service workers who also live there semi-permanently or permanently. These people are members of the community, even if they don't pay a rent or mortgage in the same way. They have children as well, who also spend their lives in the neighbourhood. Explicit and special outreach must be made to this group to ensure that their needs as occupants of the neighbourhood are also being met.

Disasters, both natural and man-made, have a varied impact on different segments of populations due to the different levels of vulnerability.

Some of the most at-risk children live in cities – on streets, in informal settlements, squatter settlements, city peripheries, etc. - with their parents (caregivers) juggling between different types of risks. In such contexts, young children, women with young children, and pregnant women are the most vulnerable due to their dependability on others and limited capacity to bounce back. Thus, it is important to have a system at both administrative and community levels to identify and address the most vulnerable.

Vulnerable urban contexts tend to have cramped living conditions and compromised access to urban services including water, sanitation, and hygiene (WASH), power, and transit infrastructure along with high levels of environmental degradation. Vulnerable urban contexts tend to be particularly exposed to the impacts of climate change. These existing precarious conditions aggravate in times of distress, rendering them more susceptible to short-term impacts, including damaged and disrupted urban services, loss of income, damaged buildings and infrastructure, and long-term impacts including physical and psychological impairments, displacement, and migration.

To alleviate such situations, it is essential to respond collectively at system and personal levels, by making urban systems robust, stable,

and responsive along with mobilising the community. Identifying and seeking support from stakeholders and local leaders who have influence and control over city operations is crucial. Appropriate actions include engaging with a wide range of urban stakeholders, having a bottom-up engagement approach, and facilitating multi-stakeholder dialogue.

Along with personal and environmental characteristics, urban local bodies need to communicate with the community members, before and during disaster situations. A network of health and education workers and frontline workers can play a crucial role in connecting with the community. Enabling a networked community by constant engagement with various types of groups based on faith, ethnicity, occupation, and such, to be able to be prepared, respond, and monitor during a disaster is critical in emergency management and action to strengthen resilience.

It is imperative to pay special attention to the special needs of ITC during and after a hazard.

The ITCN 2.0 Design Guidelines provides detailed guidelines on how various ITC-centric destinations can be developed to be Inclusive for infants, toddlers and caregivers. The ITCN 2.0 Evaluation and Monitoring Metrics can support cities with indicators to monitor the same.

## OBJECTIVES AT A GLANCE



- Safe to walk while daydreaming/ mentally distracted
- Structured, demarcated, space is assigned
- Eyes on the street, trust of neighbours
- Slow
- Respectful of privacy



- Comfortable and protected from the elements
- Quiet
- Wild
- Renewable and non-carbon energy sources
- Future-oriented, green technologies



- Legible
- Flexible
- Free of physical and virtual obstacles
- Clusters of services/convenient
- Predictable and dependable, well-communicated services



- Attention focusing (not grabbing)
- Enveloping and protecting from distraction
- Challenging
- Committed to art
- Authored by and memorialising of the childhoods belonging to it



- Listening and responding to needs of residents
- Even and thorough implementation of interventions
- Transparent processes
- Fair to all, not just 'owners'
- Objective, informed by data

## POSITIVE BEHAVIOURS TOWARDS ITCs

Positive interactions of infants, toddlers and caregivers with the surrounding environment is crucial for stimulating healthy development. However, for a holistic development of ITCs, infrastructure alone is not enough. Positive behaviours that support the needs of young children in the public realm is essential for scaling up and sustaining the young children and caregiver-friendly approach in cities.

It is crucial to consider behavioural barriers, social norms, and factors at various levels, in addition to developing infrastructure or addressing infrastructural challenges. This requires inculcating positive behavioural changes in the behaviours of all relevant stakeholders, including caregivers, local communities, and most importantly, city agencies and service providers.

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

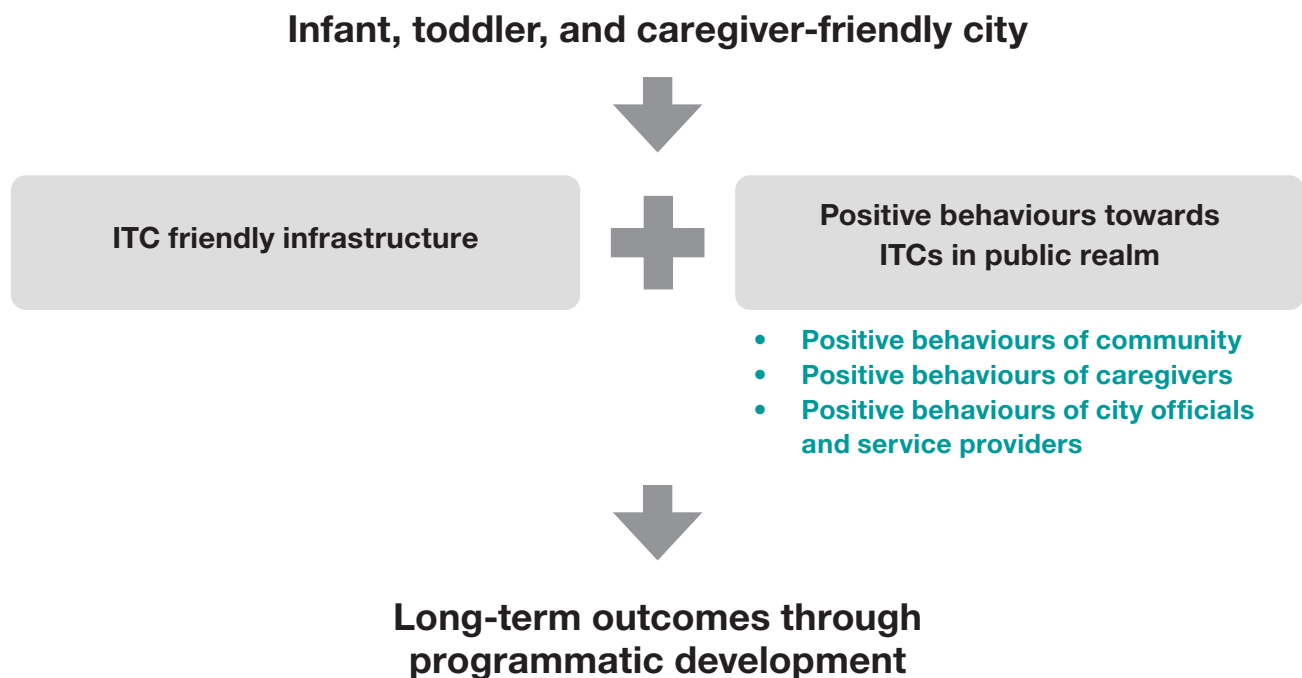


Figure 1.21 Positive behaviours and infrastructure together lead to long-term ITC-friendly development in cities

Source: WRI India

## 06 Methodology

### STRATEGIES FOR ITC-ORIENTED DEVELOPMENT

Implementing, scaling, and mainstreaming the ITCN framework across neighbourhoods in cities will require a systematic approach that prioritises the needs of infants, toddlers and their caregivers.

Figure 1.22 illustrates eight strategies that can help ULBs integrate the ITCN approach into their planning, design, and management processes, enabling cities to mainstream urban development, that responds to the needs of young children and their caregivers.

Cities need to establish an institutional setup that can anchor and facilitate ITC-oriented development, develop partnerships with different agencies and enable champions, engage with ITCs, communities and other

stakeholders to understand their needs, generate buy-in, and build capacities of city officials, communities and other stakeholders. It is essential to adopt a data-based planning approach, along with periodic evaluation and monitoring. To ensure the systematic scaling-up of the ITCN approach, cities would also need to ensure financial sustainability through mechanisms such as convergence with existing programmes and initiatives to replicate projects across the city. Going forward, cities can incorporate changes in existing plans and policies or formulate and adopt new policies that will enable them to mainstream the ITCN approach.



Figure 1.22 Eight strategies for ITC-oriented development

Source: WRI India

## HOW TO INTEGRATE EXISTING CITY PROJECTS IN ITCN?

The ITCN framework can be integrated with various ongoing projects in the city to maximise benefits for infants, toddlers and their caregivers. Projects can be identified under various National, State and city-level schemes and programmes that could incorporate the ITCN approach, such as projects under Smart Cities Mission and AMRUT. Convening stakeholders from relevant agencies and departments, who are involved in planning and implementation of such projects is a key step at this stage. Various departments from ULBs should come together to facilitate this

process as these projects may be assigned to different departments, such as Parks and Garden, Roads and Infrastructure, and Public Amenities. Further, overlaps between projects and their impact on ITCs should be studied using the ITCN approach. Discussing and ideating with agencies and external stakeholders is crucial for an inclusive approach as well as to gain momentum around it.



Identify existing projects that can incorporate ITCN approach



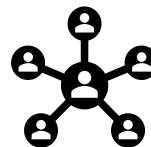
Convene multiple agencies and departments relevant to projects



Capacity building of city officials across all levels (senior officials, mid-level staff, frontline workers and their supervisors)



Discuss, ideate and draw insights from expert discussions



Connect with local representatives to gain momentum

### Case example: Rourkela

As part of the Nurturing Neighbourhoods Challenge, Rourkela has implemented young children and family-friendly interventions by leveraging convergence with various national and state-level schemes and programmes such as AMRUT, JAGA (land titling and slum upgrading programme), Mukhyamantri Karma Tatpara Abhiyan (MUKTA), Mission Shakti (women self-help groups), and Urban Transformation Initiative (UNNATI), and city level funds such as District Mineral Funds (DMF), as well as funds from Rourkela Municipal Corporation (RMC) and Rourkela Smart City Limited (RSCL). These funds have helped the city to provide play spaces and basic services in vulnerable settlements, involving communities, and to build new Anganwadi centres and redevelop PHCs across the city.

## TACTICAL URBANISM

Tactical urbanism supports the improvement of livability of neighborhoods and cities at the street, block, or building scale. Tactical urbanism, as an approach helps:

- Demonstrate how a space could be transformed to contribute to safety, improved livability and community building.
- Test new concepts and ideas before implementing them on-ground. Tactical urbanism allows you to experiment with options and gather feedback to learn what works and does not, before scaling up and making permanent interventions in the city. Think of tactical urbanism as piloting your pilots!
- Effectively communicate new ideas, build community support, and improve local understanding of urban issues.

Tactical urbanism involves pre-testing or conducting a trial of both physical and behavioural interventions, using low-cost prototypes, and gathering feedback that can inform permanent solutions. It is a deliberate approach to city-making, having the following characteristics -

- A deliberate, phased approach to instigating change;
- An offering of local ideas for local planning challenges;
- Short-term commitment and realistic expectations;
- Low-cost, with possibly a high reward; and
- Building of organisational capacity between public, private, and non-profit institutions.

## TACTICAL URBANISM SPECTRUM

Tactical urbanism projects can be placed along a spectrum of informal (community-led) to formal efforts (led by city officials). Many times, an intervention might begin as a local grassroots (pop-up) intervention that becomes successful, and soon become sanctioned or permanent. This is an example of the ways in which short-term actions and low-cost solutions can create long-term change.

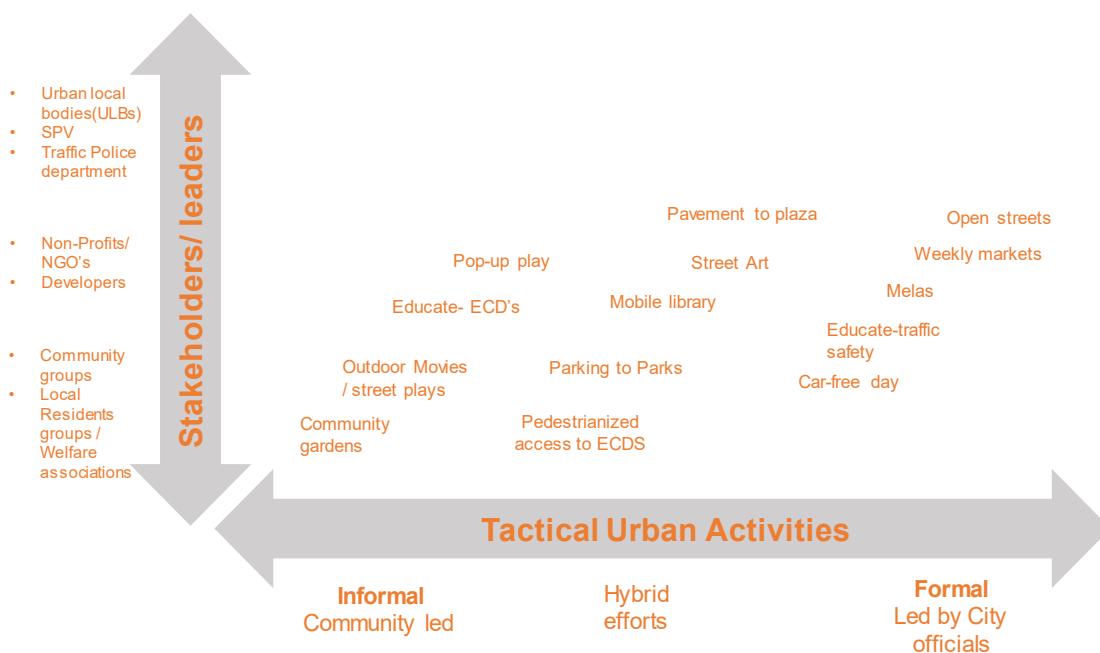


Figure 1.23 Tactical urbanism spectrum

Below is an example of one way to integrate ITCN with ongoing Smart Cities Mission

## HOW DO SMART CITIES MISSION FEATURES INTERSECT WITH ITCN?

The purpose of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology. Area-based development will transform existing areas (retrofit and redevelop), including informal settlements, into better-planned ones, thereby improving the liveability of the whole city.<sup>29</sup> New areas (Greenfield) will be developed around cities to accommodate the expanding population in urban areas in an organised way. Comprehensive development in this way will improve the quality of life, create employment and enhance income for all, especially the poor and the disadvantaged, leading to inclusive cities.

Area based development in a city may contain one or more neighbourhoods which could be retrofitted by adopting smart initiatives. Some of the components of area-based development include:

- **Holistic development of existing and new areas**
- **Quality of life in areas meets citizen's expectations**
- **Walkable localities**
- **Accessibility to park, preservation and development of open spaces**
- **Last mile connectivity to public transport**
- **Citizen-friendly and cost effective governance**

**The Smart City Mission's focus is on improving quality of life, in particular at the local level. This is essential when planning for babies, toddlers and their families.** Babies and toddlers don't travel very far — the neighbourhood is their domain. The neighbourhood represents an everyday landscape, which can either support or limit the physical, mental and social well-being of young children.

Notes:

<sup>29</sup> <http://smartcities.gov.in/upload/uploadfiles/files/What%20is%20Smart%20City.pdf>

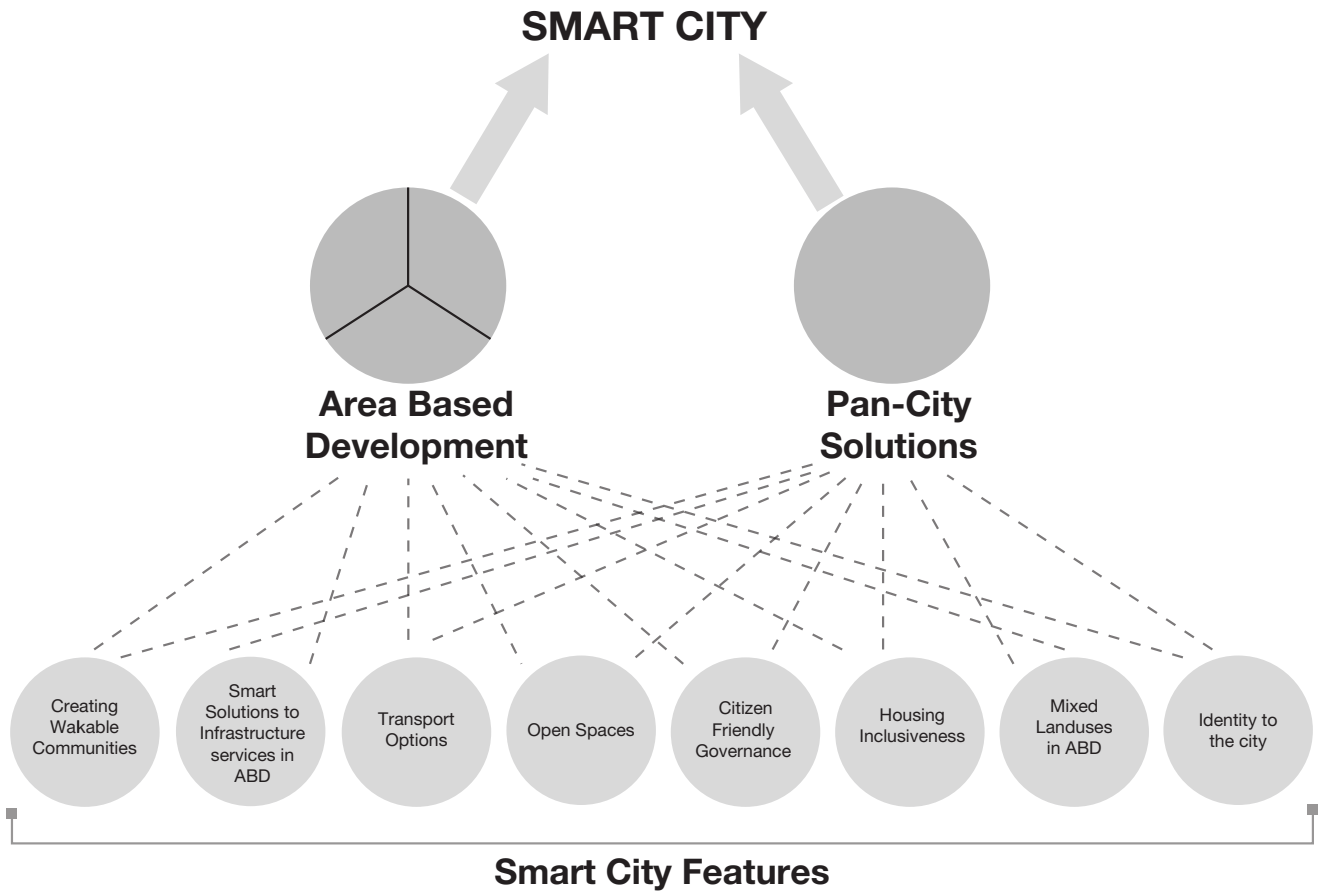


Figure 1.24 Smart City Mission Features, Source: Smart Cities Guidelines, MoHUA (formerly MoUD)

Smart Cities Mission is a key initiative for improving the quality of life of citizens of around 100 cities. The features of Smart Cities Mission coordinate well with the objectives set out for an ITCN as shown in Figure 1.25. ITCN becomes an integral link to the smart cities mission as:

- **ITCN is a unifying lens for sustainable, healthy, safe and inclusive infrastructure improvements.**
- **ITCN is an integral anchor for a network of city improvements, making smart mission milestones more meaningful to families.**
- **ITCN comes together with smart cities in data-driven decision making, to ensure fair distribution of infrastructure spending, and inclusive actions and benefits for all families.**
- **ITC-centric interventions can catalyse a ripple effect into the neighbourhood - strengthening the impact of lighthouse projects.**
- **Focus on the needs of ITCs in the planning of Smart Cities in India is part of what can fulfil the goals of sustainability, inclusion, health and safety.**

The modular nature of ITCN under the Area Based Development can result effectively in a multiplied pan-city effect.

### Placemaking Marathon:

Placemaking marathon is an initiative under the Smart Cities Mission of the Ministry of Housing and Urban Affairs (MoHUA) that encourages cities to reimagine their public spaces and transform them, following the mantra of 'test-learn-scale'. The initiative has been encouraging cities to take up light and quick transformation of public spaces that are designed keeping citizens at the heart (build for the citizens and by the citizens).

Through this initiative, several Indian cities have adopted the young children and caregiver-centric approach to develop family friendly public spaces.

#### Case example: *Chitti* park in M H Nagar slum, Warangal

The M H Nagar slum in Warangal consists of a high concentration of young children, but lacked public spaces within walking distance. The city identified an unused area within the settlement, which was previously a dumpyard, to transform into a *Chitti* (small) park for the community, incorporating feedback and suggestions from the residents in the neighbourhood. The vibrant public space with age-specific play opportunities has enabled children in the neighbourhood to play outdoors regularly, as their caregivers can watch over them, while interacting with their peers.



For more information on Placemaking Marathon, see: <https://smartnet.niua.org/placemaking-marathon/#/>

# LINKING SMART CITY MISSION FEATURES TO THE ITCN

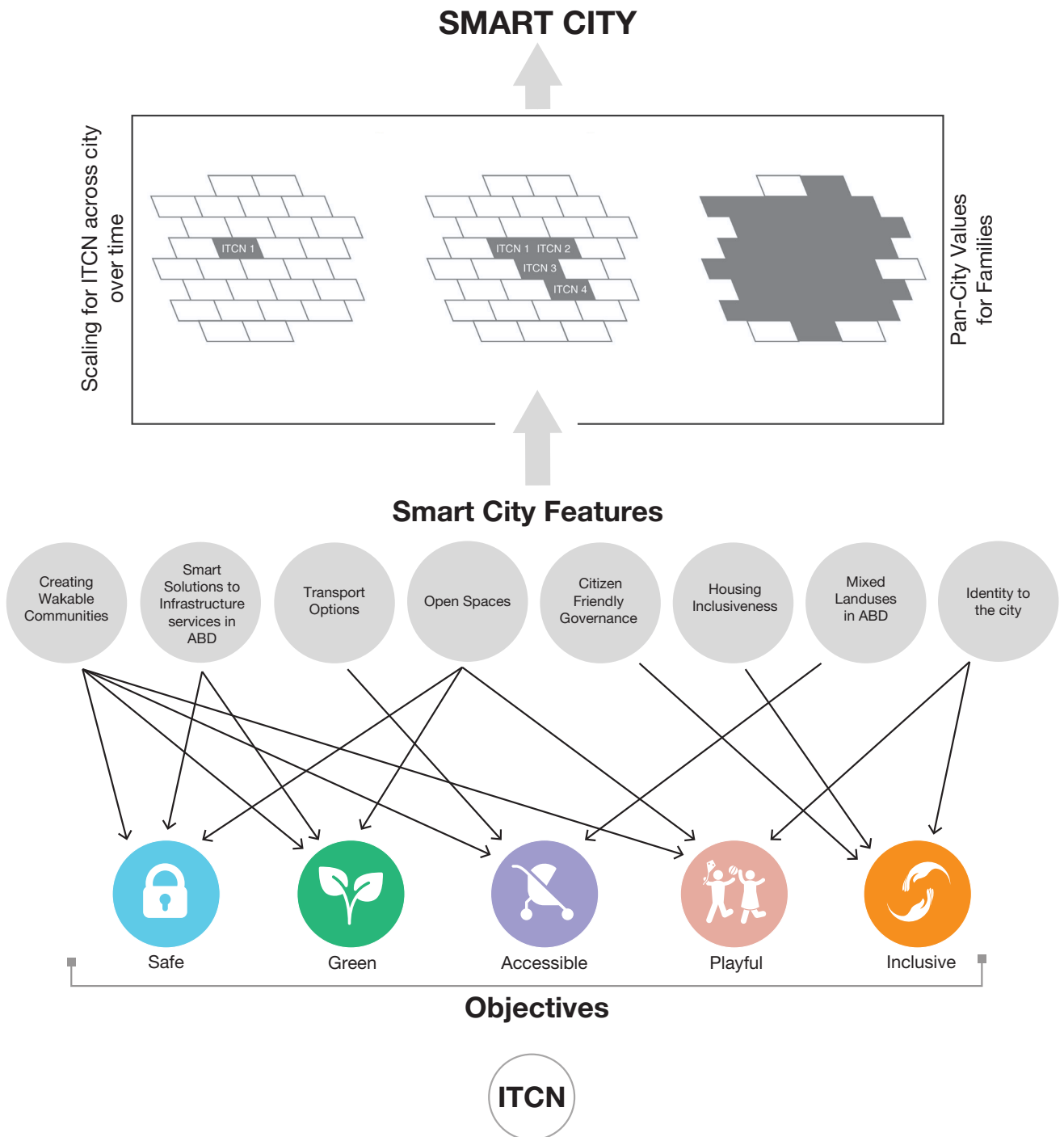


Figure 1.25 Linking Smart City Mission features to ITCN

## INTEGRATING ITCN LENS AT THE STATE LEVEL

Targeted policy interventions at the State level can play a crucial role in embedding and scaling the Infant, Toddler and Caregiver centric urban development lens across cities. States can play a catalytic role in institutionalizing ITCN by issuing model guidelines, enabling budgetary provisions, and integrating ITCN into various National and State-level programs and initiatives. Providing a conducive policy framework at the State-level will help to ensure that cities take actions towards young children and caregiver-oriented development. Integrating young children and caregiver-oriented design principles in the urban policies and guidelines will assure that the early childhood development considerations are standardized in spatial planning and resource allocations. Policies mandating these considerations in the development of public open spaces, and early childhood facilities such as Anganwadis, Public Health Centers will support creating safe, accessible and inclusive neighbourhoods. Strong policy framework also supports intersectoral collaborations between health, education, development, welfare to create a cohesive ecosystem towards early childhood development.

### Understanding current policies and programs

Towards mainstreaming infant, toddler and caregiver-oriented development in the cities, a State-level policy landscape assessment is essential as a first step. This assessment of existing policies and programs will help identify existing policy gaps and find convergence opportunities within various programs to integrate the young children and caregiver lens in urban development initiatives. Such an assessment can be taken up for various policies and programs under different domains such as public spaces, women and children, health and nutrition, education, housing, industries, transportation, environment, etc. towards mapping all aligned policies across the State and identify opportunities

for convergence. This will also support in identifying actionable directions for embedding the ITCN approach within the State-level frameworks.

### Convergence opportunities

Both National and State-level programs and schemes provide significant leverage for embedding early childhood and caregiver-centric components within broader development agendas. For example, Missions such as Atal Mission for Rejuvenation and Urban Transformation 2.0 and Swachh Bharat Mission 2.0 offer frameworks for urban infrastructure development around parks, playgrounds, public open spaces and sanitation that can be strategically aligned. Additionally, schemes like the National Urban Livelihood Mission (NULM) can be instrumental in fostering a greater alignment between physical infrastructure development and improved social outcomes, particularly concerning the livelihoods and well-being of caregivers, especially parents of infants and toddlers. The National Health Mission provides a comprehensive platform for ensuring comfortable seating and waiting spaces for pregnant women, play facilities for young children among other health-related infrastructure and service delivery. Leveraging such opportunities of convergence with an integrated approach will significantly enhance early childhood development, caregiver support, and parental well-being across the State, and ensure scaling of ITCN.

## EMBEDDING ITCN FRAMEWORK AT THE STATE LEVEL

To effectively scale inclusive and nurturing neighbourhoods, States can play a vital role in providing a direction and enabling environment to cities. Some of the potential actions that maybe taken up are as follows:

### **Issuance of directives/ circulars/ etc.:**

Promptly issue directives, circulars, and similar advisories to all relevant implementing agencies towards mandating the inclusion of specific considerations for young children and caregivers when designing and developing public spaces including open spaces, parks and playgrounds, AWCs, PHCs, etc. within ongoing and upcoming urban initiatives.

**Training and Capacity Building:** Launch and conduct regular Capacity Building programs for key stakeholders, including decision-makers, engineers, designers, and front-line workers across relevant departments. These trainings shall integrate sensitization on young children and caregiver-centric planning and provide specialised training modules and workshops embedded within the departments' annual training calendar to cover practical skills and working knowledge on topics such as Design of public spaces, streetscape development, Early Childhood Development centers, responsive caregiving, and parental wellbeing, ensuring that participants are equipped to apply young children and caregiver-lens in their respective domains.

### **Adoption of Standardized Checklists:**

Promote and ensure the widespread adoption and consistent use of standardized audit checklists. These checklists will serve as practical tools for evaluating the young children and caregiver-friendliness of newly developed or retrofitted public open spaces, and early childhood development centers (such as Anganwadis and Primary Health Centers) in a collaborative manner with all relevant departments involved.

### **Amendment of Regulatory Frameworks:**

Integrate detailed design standards into existing regulatory frameworks through necessary amendments of existing clauses and issuance of departmental notifications. These standards shall guide new construction and retrofitting efforts for all upcoming development projects, township projects, housing and slum redevelopment projects, social infrastructure projects including AWCs and PHCs, ensuring the creation of spaces supportive of young children and caregivers.

**Monitoring and Evaluation:** Continuously monitor and refine the integration of design standards and audit processes to ensure that all future urban development, housing, and public health policies and programs foster young children and caregiver-friendliness. This involves, establishing feedback loops, regular review and updates of relevant ongoing works and regulatory frameworks based on evolving good practices and community needs.

Institutionalizing the ITCN lens within urban development policies requires strong inter-departmental collaboration, as these areas intersect health, education, housing, and social welfare sectors. **A coordinated approach is crucial at the State level** to ensure essential urban infrastructural interventions including housing, public spaces, transport, actively supports the developmental needs of young children and the wellbeing of their caregivers. **State governments can also become key anchors to encourage participatory planning tools** that facilitate community consultations, especially with women and other caregivers of infants and toddlers, during the design and implementation of urban initiatives to ensure policies reflect lived realities and local cultural contexts.

# FRAMEWORK FOR ITC ENGAGEMENT

Engaging stakeholders in the planning and design of ITC-centric projects is key in developing children-friendly cities.

Infants, toddlers and caregivers are key stakeholders in the ITC-oriented development process, as they have unique needs and aspirations that inform and educate the strategies and solutions.


Stakeholders also includes public sector stakeholders, community members, and private sector stakeholders. (Please see table alongside for a detailed list of relevant stakeholders.)


Identifying and engaging with champions
<p>A champion is anyone who influences or is impacted by a decision and/or organisations, groups or persons who have a stake, claim, or an interest and/or contribute/s to the subject.</p> <p>Stakeholder engagement can be defined as the process by which an organisation and/ or party involves central agents of a subject (persons, communities, welfare, and service agencies) to align societal needs and expectations with practices and solutions.</p>

Table 1.1 Understanding stakeholders and stakeholder engagement

An overview of stakeholders relevant to ITC welfare is highlighted in the ITCN 2.0 Policy Workbook. They can broadly be categorised into stakeholders at the public sector domain, at the regional and city levels, community stakeholders, and private sector stakeholders.

A sample list of stakeholder groups in the Indian context for enhanced ITCN process participation is shown in Table 1.2.

Public Sector Stakeholders 
<ul style="list-style-type: none"> <li>• Urban Local Body (ULB)</li> <li>• Municipal Commissioner</li> <li>• Mayor</li> <li>• Municipal departments (such as Public Works, Town Planning, Health, etc.)</li> <li>• Smart City Cell (and their technical consultants/ knowledge partners)</li> <li>• Ward Councillors</li> <li>• Local Councillors (such as Local Area Federations, Slum Forums)</li> <li>• Public Transit Agencies</li> <li>• City Police Department and Traffic Police</li> <li>• Government Programme Workers (such as Anganwadi Workers (AWW) and ASHA workers)</li> </ul>

Community Stakeholders 
<ul style="list-style-type: none"> <li>• Young Children and their Caregivers (such as pregnant women, parents, older siblings, grandparents, etc.)</li> <li>• Community Members (such as community leaders, women groups)</li> <li>• Community/ Civil Society/ Not-for-profit Organisations</li> <li>• Early Childhood Development Service</li> <li>• Institutes (such as education and health)</li> <li>• Resident Welfare Associations, Neighbourhood Associations</li> </ul>


Private Sector Stakeholders 
<ul style="list-style-type: none"> <li>• Developers and investors</li> <li>• Academic and Knowledge Institutes</li> <li>• Built-environment professionals (such as developers, urban planners and designers)</li> </ul>

Table 1.2 Sample list of stakeholders relevant to ITC welfare in the Indian context

To have a robust stakeholder engagement, identifying sub-stakeholders from the three categories (as shown in Table 1.2) is crucial. It should be noted that certain stakeholder groups may have more in-depth opportunities for engagement. For example, engagement mechanisms that encourage community leaders to communicate between community residents and governments, recognising and promoting children and young people to act as change-makers and leaders, can help develop cohesive engagements. Additionally, considering equitable participation will help include voices of all stakeholders, particularly from vulnerable groups.

Engagement programmes and capacity building can be undertaken to encourage communication, skill development, and solution prioritisation among stakeholders. Such tools are also helpful in arriving at consensus in co-creative solution building processes, especially if involving conflicts such as on land use or inter-departmental coordination. The ITC Stakeholder Engagement Process provides guidance to boost a two-way approach for city officials, social service agencies, and ITCs to be engaged in participatory action programmes and mechanism for holistic and integrated development of ITC-friendly cities.

The guidelines have been drafted for development practitioners (in institutions), to adopt and adapt a step-by-step process for engagement between key ITC stakeholders. The participation guidance is intended to inform, consult, involve, collaborate, and empower its stakeholders.

### Process for ITC Stakeholder Engagement

The process for stakeholder engagement is a two-way dialogue between stakeholders. The process is an iterative and not linear course, to have meaningful engagements while developing external relationships over time. The process structure suggested for ITC stakeholder engagement has five principal dimensions:

- Engagement strategy (or logic model)
- Project cycle
- Engagement scale
- Engagement
- Action plan

Figure 1.26 provides an overview of the process for engagement, as a support structure for practice.

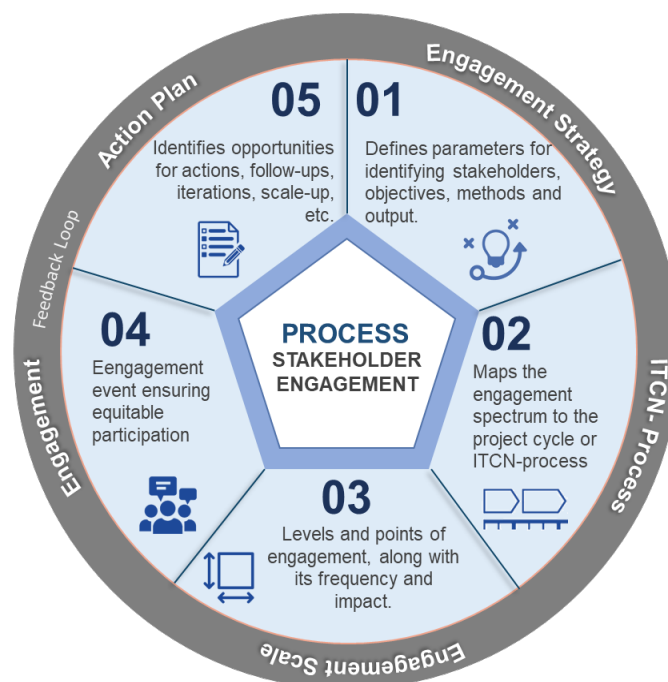


Figure 1.26 Process flow for ITC stakeholder engagement

The following section provides a brief of each of the steps in the process, along with templates and examples, where applicable, for reference.

**STEP 1: Engagement Strategy**

To develop a strategy or logic model, a set of parameters can be considered to identify opportunities and determine actions. The template presented below is a useful

checklist, which can help identify and prioritise stakeholders, plan and scope actions, and select suitable engagement mechanisms. It further allows for time and resources to prepare internally.

An example of the engagement strategy parameters or logic model is presented in Table 1.3. The table also highlights a basket of engagement tools and methods for selection.

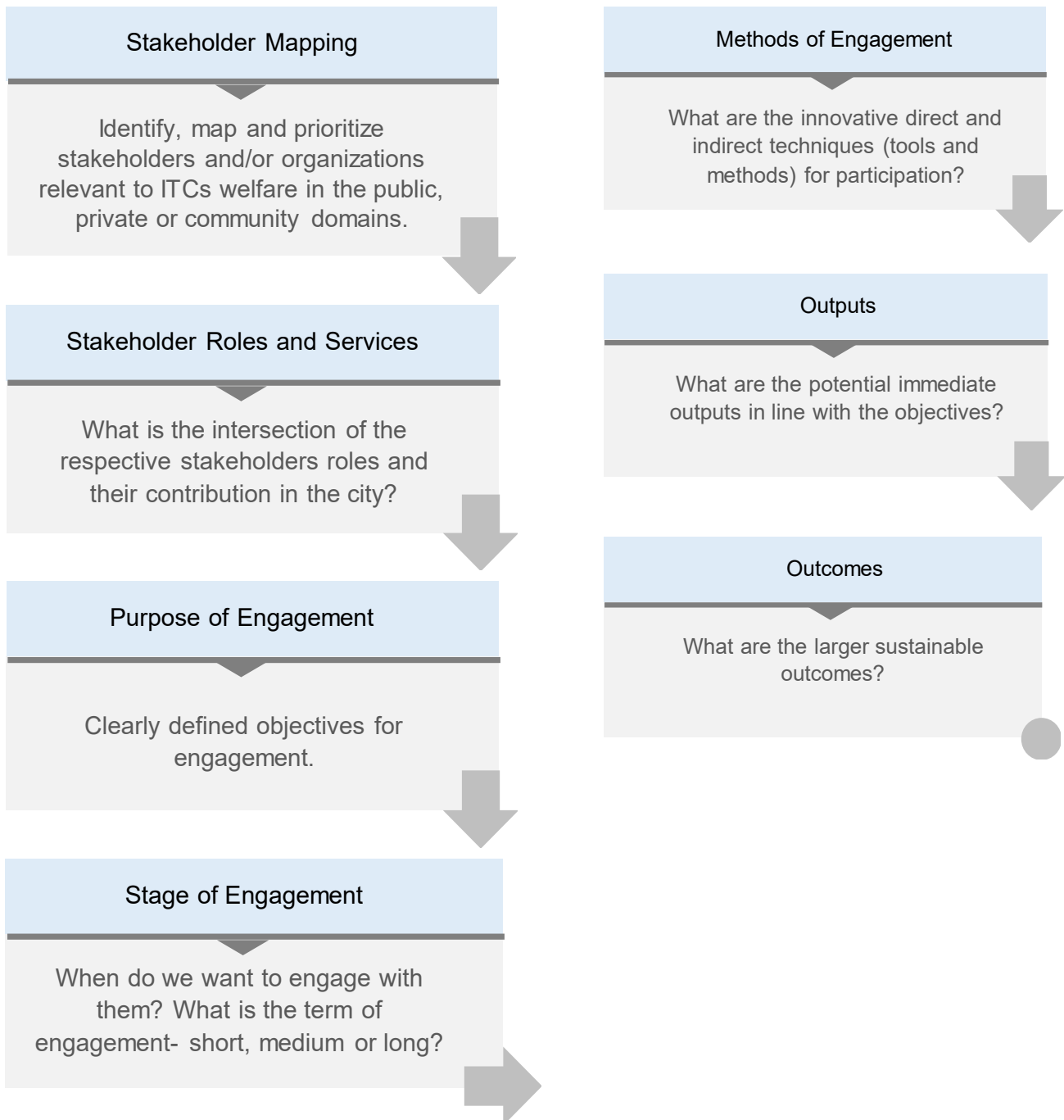


Figure 1.27 Engagement strategy or logic model template

Stakeholder Mapping	Stakeholder Roles and Services	Purpose of Engagement	Stage of Engagement	Methods of Engagement	Outputs	Outcomes
Urban Local Body <ul style="list-style-type: none"> <li>Commissioner</li> <li>Officials from various departments such as Town Planning, Roads, Parks and Garden, Women and Child Development, Education and Health department</li> <li>Ward Councillors</li> </ul>	Develop urban services and implement related National/ State schemes, programmes	<ul style="list-style-type: none"> <li>To incorporate ITCN lens in public projects</li> <li>To enhance capacity of staff</li> </ul>	Short, Medium and Long	<ul style="list-style-type: none"> <li>Advocacy and awareness</li> <li>Workshops, webinars, case studies</li> <li>Co-creating exercises</li> <li>FGD, plenary discussions, interviews, brainstorming</li> <li>Gamified exercises, interactive group work</li> </ul>	<ul style="list-style-type: none"> <li>Public projects consider ITC-friendliness as a key component</li> <li>Improved cross-sectoral/ inter department coordination and planning for ITCs</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced awareness/ capacity of staff towards ITC-centric development</li> <li>Policy making and institutional measures taken regarding planning of ITC-friendly cities</li> </ul>
Public transit agencies	Provide mobility services and related infrastructure	<ul style="list-style-type: none"> <li>To sensitise agencies to incorporate ITC- friendly features in the transit modes and stations, infrastructure</li> </ul>	Medium and Long	<ul style="list-style-type: none"> <li>Advocacy and awareness</li> <li>Workshops, webinars, case studies</li> <li>Co-creating exercises</li> <li>FGD, plenary discussions, interviews</li> </ul>	ITC-friendly design in public transport and infrastructure	<ul style="list-style-type: none"> <li>Increase of ITCs rights in everyday mobility experiences</li> <li>Increased usage of public transport by ITCs</li> </ul>
Caregivers (pregnant women, parents, grandparents, other relatives, older siblings etc.)	Day to day/ continued interaction with infants and toddlers for various needs and caregiving	<ul style="list-style-type: none"> <li>To highlight ITC needs and challenges faced</li> </ul>	Short, Medium and Long	<ul style="list-style-type: none"> <li>FGDs and interviews</li> <li>Observation surveys, activity mapping, role play, storytelling</li> <li>Voting, ranking preferences</li> <li>Co-creating exercises</li> </ul>	Co-created design solutions, developed in consideration of the needs of ITCs (based on mapping and surveys, field notes, FGD reports and documentation)	Increase in participation of caregivers, communities, buy-in and consensus of communities towards ITC-centric development
NGOs, Community organisations working with Early Childhood Development facilities	Overall improvement of the health and wellbeing of ITCs	<ul style="list-style-type: none"> <li>To understand needs of infants, toddlers, and their caregivers</li> <li>To leverage them as champions to generate awareness and support in mobilising communities</li> </ul>	Medium	<ul style="list-style-type: none"> <li>Reflections, advocacy and awareness workshops</li> </ul>	ECD campaigns and programs, trainings that generate awareness towards overall health and wellbeing of ITCs	Increase in participation of caregivers, communities, buy-in and consensus of communities towards ITC-centric programs and services

Table 1.3 Example of an engagement strategy or logic model

## STEP 2: ITCN Project Cycle

The engagement strategy or logic model, is planned for a specific stage of the project cycle.

The skeletal framework of the project cycle consisting of 4 major steps and 13 sub-steps, considers social inclusion, data-oriented approach, and participation of all stakeholder groups.

Table 1.4 provides an overview of the outline of the project cycle.

Steps of ITCN-Project Cycle
<b>1. Diagnose</b> i. Assess current situation ii. Identify problem iii. Vision creation
<b>2. Plan</b> iv. Co-creation of solutions v. Detailed design vi. Pre-test/ Trial of temporary interventions vii. Sustainable finance
<b>3. Implement</b> viii. Ensuring appropriate design and specifications ix. Operation and maintenance
<b>4. Evaluate and Monitor</b> x. Evaluation and monitoring xi. Feedback mechanism xii. Scaling strategies xiii. Institutionalisation

Table 1.4 Outline of ITCN project cycle

## STEP 3: Engagement Scale

The engagement scale refers to the point of engagement. It can reside on different levels, from individual or groups to an organisation and within and the interfaces between them.

It also considers frequency and intensity of interactions. Considering the scale of engagement helps focus on the impact and the required logistics for engagement.

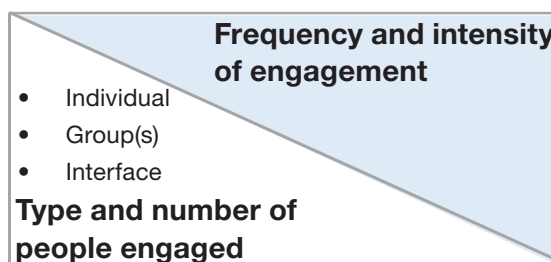


Figure 1.28 Engagement scale

## STEP 4: Engagement

Engagement is the event of conducting activities with ITC-related stakeholders. Its aim is to ensure a two-way equitable consultation, while focusing on the objective and capturing reflections and feedback.

Engagement should take place at every step of the ITCN project life cycle, from understanding the needs and concerns of the stakeholders, to seeking their inputs to form vision, cocreating solutions, taking feedback on the pre-testing of temporary interventions, operation and maintenance, periodic evaluation and monitoring and establishing a feedback mechanism. The consultations should exhibit the characteristics listed in Table 1.5.<sup>30</sup>

Characteristics of Stakeholder Engagement (Consultation)
<ul style="list-style-type: none"> <li>Contextual focus/ realistic</li> <li>Equitable representation</li> <li>Responsive</li> <li>Flexible but complete</li> <li>Adequate time</li> <li>Supporting materials and facilitator notes</li> </ul>

Table 1.5 Characteristics of engagement

<sup>30</sup> Adapted from 'Stakeholder Engagement: A Road Map to Meaningful Engagement', Doughty Centre for Corporate Responsibility, Cranfield School of Management.

## STEP 5: Action Plan

An action plan post engagement allows the translation of insights and findings from an activity, and identifies opportunities and iterations to determine further actions and engagements. Applying this approach allows to focus on stakeholders that matter the most, who can add value and drive mutual benefit.

To determine the course of action the points listed in Table 1.6 can be considered.

<b>Considerations for Action Plan Development</b>
<ul style="list-style-type: none"> <li>• Document reflections from the engagement session</li> <li>• Revisit objectives of the engagement session</li> <li>• Draw an initial outline of (solution) measures</li> <li>• Assess measures to manage participants intentions, overall goals, capacity, cost, time, impact, etc.</li> <li>• Consult and finalise measure with key stakeholders</li> <li>• Implement measures</li> <li>• Monitor, evaluate and scaleup as necessary</li> </ul>

Table 1.6 Considerations for developing an action plan

### 3. Way Forward

It is recognised that the stakeholders involved in developing ITC-friendly cities comprise of city officials and service providers from various city agencies and users in the public realm (i.e. infants, toddlers, and their caregivers).

The efforts of governments and communities are vital to protect and fulfill ITCs rights. Therefore, all relevant stakeholders need to be consulted to enable a holistic development for ITCs.

## NEXT STEPS

While the ITCN objectives define the broader spheres of aspirations, the indicators and their service level benchmarks help city managers understand exactly what is needed and how much. The indicators and the objectives are aligned so that by implementing as per the service level benchmarks, a city is also fulfilling the ITCN objectives. The indicators are categorised under the elements of an ITCN, for ease of understanding, as well as to measure behaviour change in the community, and among caregivers and city officials.

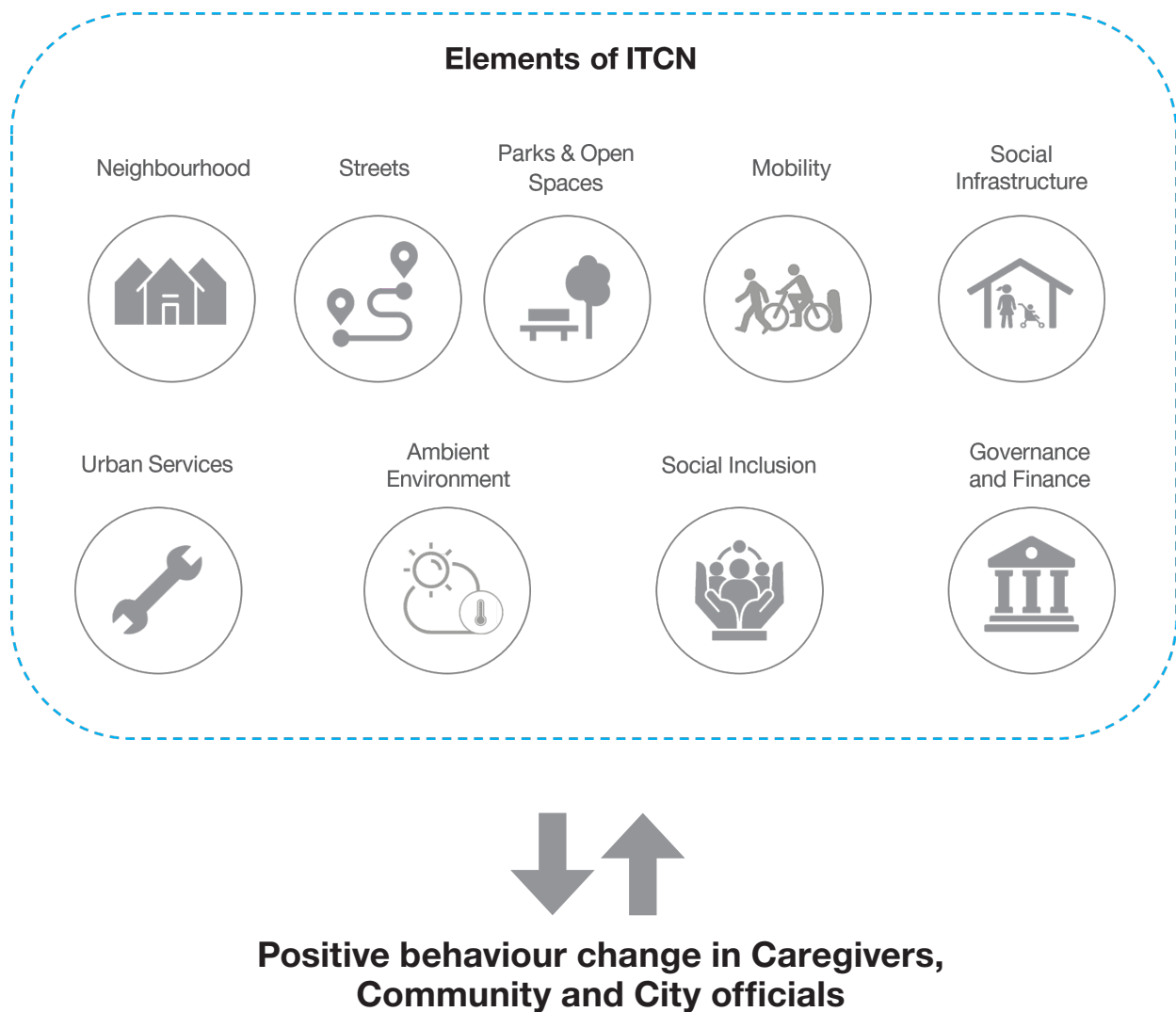


Figure 1.29 Elements of ITCN

Source: WRI India

### Neighbourhood

*Neighbourhood* covers the larger scale organisational factors, its urban design. This is the process of giving form, shape and character to urban spaces that will influence the overall physical environment.

This will ensure that the distance of the play area and amenities are within reach for most, play areas are not incorrectly located near a busy junction; the neighbourhood is walkable and cycle-able, the street has active and aesthetic edges, public spaces are well designed, there are adequate bus stops that are well located, car parking is managed and not obtrusive.

### Informal settlements

*Informal settlements* focus on the key elements of the public realm such as streets, public spaces in these settlements which can be made conducive for young children and their caregivers.

Guidelines are provided to introduce measures to create and enhance public spaces within the settlements, improve accessibility and connections, incorporate ITC-oriented services and amenities in existing facilities, and formulate regular programming with activities to activate the public spaces and ensure sustained usage.

### Streets

*Streets* focus on everyday paths taken by young children and their caregivers, to local urban services and parks.

Guidelines will seek to introduce measures for traffic calming and management, quality of sidewalks, security on the streets, providing ramps for strollers, ensuring well-lit and safe streets, adding informal play spaces within sidewalks, dedicated car-free streets (permanent or temporary), adding wayfinding measures at the correct height for children, adding cycle lanes, safe intersections, and management of stray animals, etc.

### Mobility

*Mobility* for ITCs primarily involves walking within their neighbourhoods but also extends to use of public transport and IPT services to travel to their destinations around the city.

The guidelines under this component suggest measures to improve availability, access and suitability of transit solutions for ITCs, based on the understanding of their specific travel patterns.

### Parks and Open Spaces

*Parks and open spaces* are key green destinations relevant for ITCs.

The guidelines under this component will suggest ideas on maintenance, lighting and play equipment and safety features, formal and informal play zones for each age group, climate protection, protection from strays, safety and comfort of caregivers while assisting young children in parks and so on.

### **Social Infrastructure**

*Social infrastructure* includes typical places in a neighbourhood that are relevant to and frequently accessed by ITCs. These include health and education services (such as anganwadi centres, primary health centres), local shopping and other community facilities, and local amenities.

The guidelines focus on improving access to these ITC destinations, creating a stimulating yet peaceful environment to enhance play and learning opportunities, and adapting these spaces for caregiver convenience.

### **Ambient environment**

Young children are more susceptible to the increasing changes in the *Ambient environment* of our cities. Increasing pollution levels highly impact the day-to-day functioning of ITCs, including their time spent outdoors and in public spaces, putting them at greater risks.

The guidelines under this component include measures to reduce exposure to air pollution for all.

### **Urban Services**

A neighbourhood can only function if the basic *urban infrastructural services* in it are well maintained and operated with efficiency by the local governance body. These basic services include water, electricity, waste, drainage and other environmental factors.

Having understood the need for considering ITC requirements in a neighbourhood’s plan, and the objectives to achieve; the next step is to measure the existing conditions of your neighbourhood, as well as understanding the existing behaviours of caregivers, community and city officials. The Evaluation and Monitoring document will assist you with component-wise indicators to establishing a baseline and to identify gaps in quality, and how to ameliorate those gaps with the assistance of the Design Guidelines.

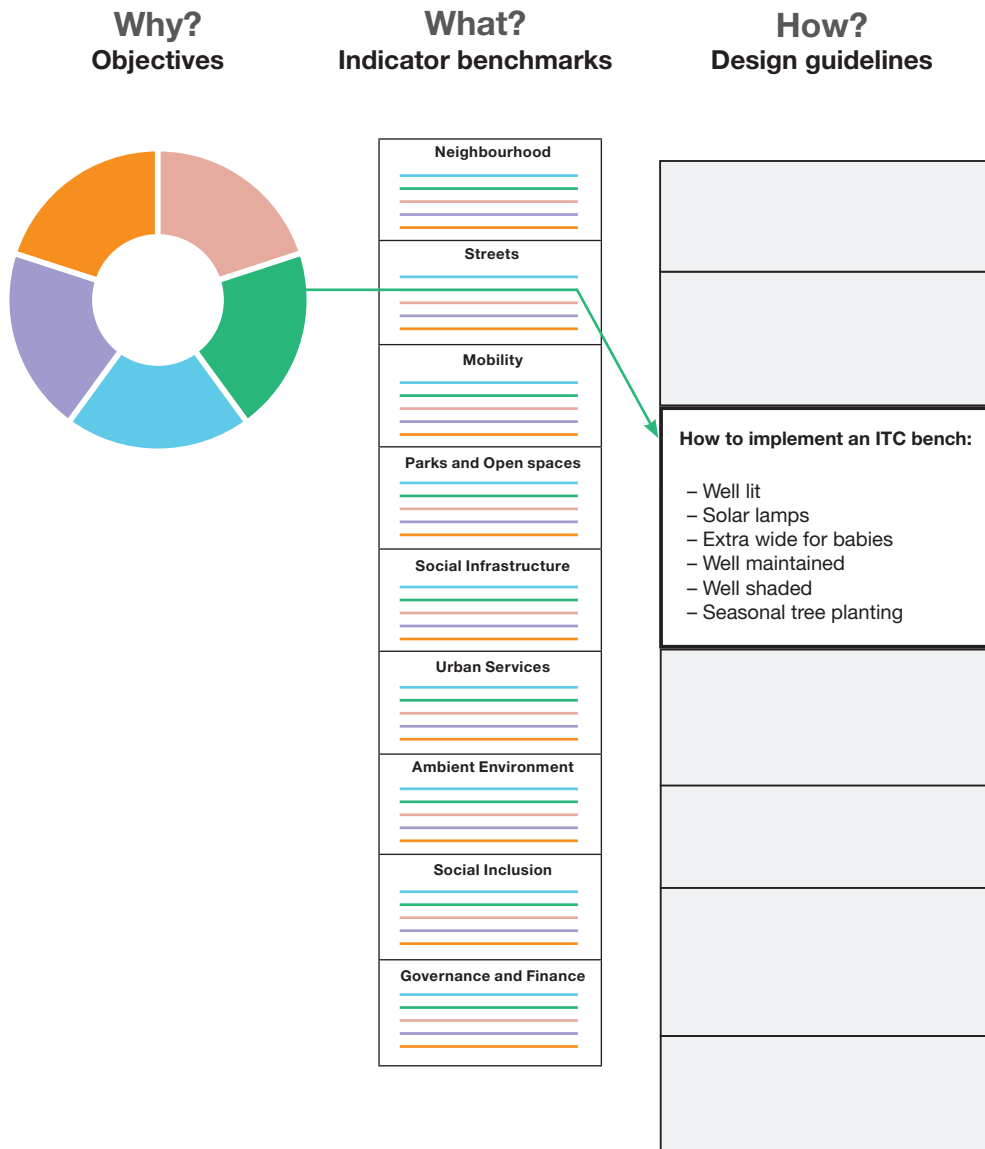


Figure 1.30 Next steps

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# Acknowledgements

The first version of the ITCN Capacity Building Documents were developed under the leadership of the Ministry of Housing and Urban Affairs' India Smart Cities Mission, with the vision and guidance of Joint Secretary Kunal Kumar and his team. Teams of experts from the Van Leer Foundation and BDP, as well as other institutions and affiliations authored the documents. Simon Battisti served as project co-lead, with the expert support from Prakash Paul and Hannah Wright. The outside expert review panel for this document was Jens Aerts, BUUR-Bureau for Urbanism; Ankita Chachra, NACTO; Tim Gill, Rethinking Childhood; Amanda O'Rourke, 880 Cities; Sophie Schuff, Gehl Architects; Hitesh Vaidya and UN-Habitat India. City representatives from Bhubaneswar, Pune, and Udaipur, as well as a range of technical partners contributed knowledge and feedback in workshop format.

Rushda Majeed, Van Leer Foundation, led the overall effort, with the strategic guidance and expertise of the Van Leer Foundation's Management and Knowledge for Policy team in The Hague.

The ITCN Capacity Building Documents 2.0 have been updated based on the on-ground learnings and reflections from the Nurturing Neighbourhoods Challenge (NNC). The documents capture the learnings from various projects implemented and processes adapted by the 10 winning cities as part of the Challenge: Bengaluru, Hubballi Dharwad, Indore, Jabalpur, Kakinada, Kochi, Kohima, Rourkela, Vadodara and Warangal. The team from WRI India associated with the Nurturing Neighbourhoods Challenge have been involved in the making of the documents with the support of Van Leer Foundation and expert reviewers.

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