



## MOBILITY

### WHAT CAN WE DO IN THE MANAGEMENT OF URBAN FLOWS AND MOVEMENTS TO IMPROVE CHILD–CAREGIVER INTERACTIONS AND CAREGIVER WELL-BEING?

*Ideas...*

1 Safer street crossings	2 Subsidised public transport	3 Children routes	4 Safe, interesting and playful transit	5 Pedestrian improvements
6 Traffic calming	7 Protected bike lanes	8 Everything nearby		

This category focuses on how movement, transit and reaching destinations can be moments of positive interaction between young children and caregivers. Ideas in this category tend to relate more to Planning and Transport departments. The suggested interventions aim at improving the experience of mobility for caregivers, to enhance their well-being and enable more quality time. This category tends to focus on the caregiver's experience in reaching key destinations such as healthcare services or a play space. Key factors would be proximity, safety, predictability and reliability of transit.

At this level, impact can be measured through indicators focusing on caregiving behaviours and caregiver well-being, but also on time, distance and user experience of transit.

*Sample outcome areas...*

- Reduced cost and average time to reach healthcare, childcare, preschool, green space and a source of healthy food
- Reduced caregiver stress and isolation
- Increased instances of caregivers who walk or bike with young children
- Improved air quality
- Reduced traffic-related deaths and injuries
- Improved access to early childhood services

## Idea 1

# SAFER STREET CROSSINGS

Road crossings can easily be made safer for young children and caregivers by signage for drivers.

For example, adding colours increases awareness of the presence of children and encourages them to use crossings. More comprehensive design interventions can significantly increase safety, such as adding traffic islands, shrubs and other shielding elements, as well as introducing speed reduction devices such as speed bumps. Design interventions may also influence perceived safety for parents, reducing their stress levels.

## At a glance...

### COST

\$ \$\$ \$\$\$

### MAINTENANCE

● ○ ○

### GOVERNMENT INVOLVEMENT

- Social Services
- Parks
- Education
- Planning
- Health
- Transport

### MINIMUM SCALE

A few square meters



### EXISTING IMPLEMENTATION LEVEL

Tested and implemented

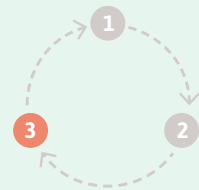


Photo: Courtesy of Liga Peatonal



## More info...



### OUTCOME AREAS

- Reduced caregiver stress and isolation
- Increased instances of caregivers who walk or bike with young children
- Reduced traffic-related deaths and injuries
- Improved access to early childhood services



### REAL WORLD EXAMPLES

- In **La Paz, Bolivia**, the Traffic Zebras are a fleet of urban educators dressed in zebra outfits, whose role is to raise awareness in a creative and memorable way about safe crossing behaviours for pedestrians and drivers. It is particularly popular with young children and parents.
- **Bhubaneshwar India**, is redesigning its Janpath road for a safer accessibility for children, focusing on crossings leading to schools. This includes increasing visibility on the crossing itself, reducing the kerb height for younger children or adding ramps for pushchairs and signage around schools. It also means adding vegetation and turning the road into a pleasant and more interesting walk for children.
- In **Mexico City**, *Liga Peatonal* uses data on road accidents to inform road safety recommendations around schools. They have engaged in pilot projects, advocacy, and a public information campaign to uphold children's right to the city.



### RELATED IDEAS:

- 5 Temporary play streets
- 3 Children routes
- 4 Safe, interesting and playful transit
- 5 Pedestrian improvements
- 6 Traffic calming
- 7 Protected bike lanes
- 3 Data dashboards



### LEARN MORE

- *Cities Safer by Design* by the World Resources Institute's Ross Centre for Sustainable Cities
- *Global Street Design Guide* by the National Association of City Transportation Officials (NACTO)
- *Pedestrians First, tools for a walkable city* by the Institute for Transportation and Development Policy (ITDP)

## Idea 2

# SUBSIDISED PUBLIC TRANSPORT

The price of public transport acts as a barrier to mobility for the poorer sections of the population.

One result is reduced access to healthcare, leading to fewer prenatal visits and a higher likelihood that a caregiver will wait until an emergency to seek help. Lowering the cost can improve access and improve healthy development for both mother and child. Reducing the transport burden also contributes to reducing levels of stress of caregivers.

## At a glance...

### COST

\$ \$\$ \$\$\$

### MAINTENANCE

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### GOVERNMENT INVOLVEMENT

- Social Services
- Education
- Health
- Parks
- Planning
- Transport

### MINIMUM SCALE

City



### EXISTING IMPLEMENTATION LEVEL

Tested and implemented

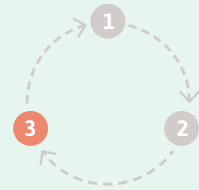


Photo: Oded Antman/Bernard van Leer Foundation



## More info...



### OUTCOME AREAS

- Reduced cost and average time to reach healthcare, childcare, preschool, green space and a source of healthy food
- Reduced caregiver stress and isolation
- Improved access to early childhood services



### REAL WORLD EXAMPLES

- In **São Paulo, Brazil**, the *Programa Mãe Paulistana* aims to ensure access to healthcare throughout pregnancy by providing a free travel card to pregnant women. This programme is coupled with further incentives such as the gift of a bag of baby clothes for completing the full six prenatal visits.
- In **Columbus, Ohio, USA**, pregnant women at risk under Medicaid insurance can order a van for non-emergency travel to their medical appointments or support programme (Moms2B) sessions. However, the service is deemed unreliable by users and has been assessed by Alphabet's Sidewalk Labs as lacking the public funds to function properly.
- In **Japan**, pregnant women in **Tohoku** are able to pre-register for certain maternity services with some of the city's taxis, named 'Sankyu'. It gives them priority when heading to prenatal check-ups at any time of the day or night and places them on the urgent list when going into labour. Some taxi companies are also educating their drivers on how to look after expectant mothers on their way to the hospital.



### RELATED IDEAS

- 6 Opening public facilities out of hours
- 4 Safe, interesting and playful transit
- 5 Pedestrian improvements
- 8 Everything nearby
- / Priority access to services for young families

## Idea 3

## CHILDREN ROUTES

Marking children's daily routes with colours and playful elements can help improve their mobility while increasing the playability of the public space. These routes typically connect residential areas with schools, playgrounds and parks.

This also alerts drivers to the presence of children in the area, and increases levels of perceived safety for parents, thus reducing their stress levels. It allows for earlier independent mobility and ensures a visible focus on children mobility.

Implementing a children route may lead to a public space being assessed for friendliness to families, by identifying dangerous areas, for example.

## At a glance...

## COST

\$ \$\$ \$\$\$

## MAINTENANCE

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## GOVERNMENT INVOLVEMENT

- Social Services
- Parks
- Education
- Planning
- Health
- Transport

## MINIMUM SCALE

Neighbourhood



## EXISTING IMPLEMENTATION LEVEL

In experimentation

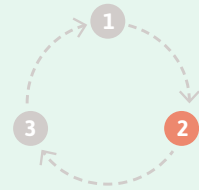
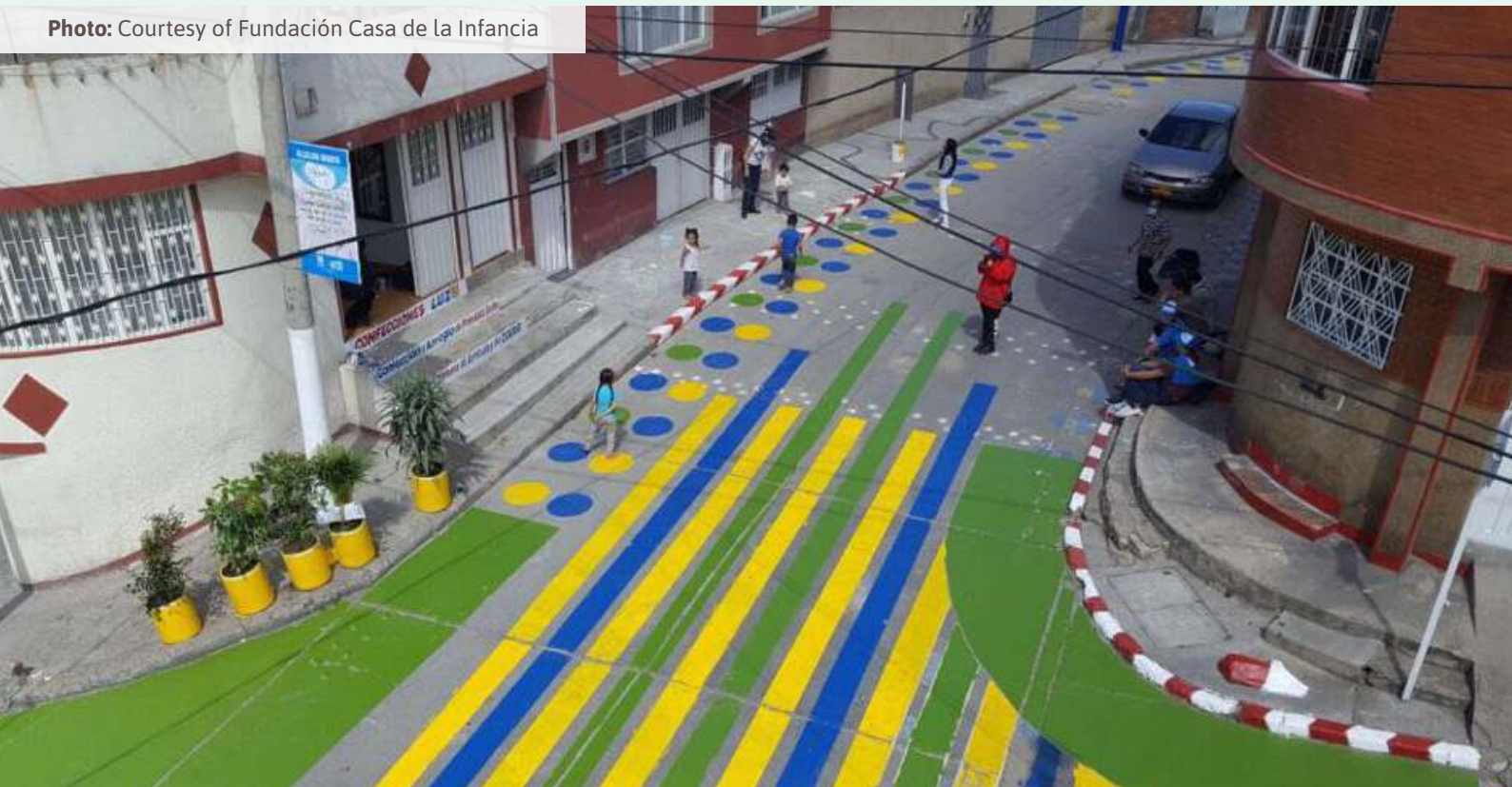


Photo: Courtesy of Fundación Casa de la Infancia



## More info...



### OUTCOME AREAS

- Reduced caregiver stress and isolation
- Increased instances of caregivers who walk or bike with young children
- Reduced traffic-related deaths and injuries



### REAL WORLD EXAMPLES

- The *Kindlint* or 'child-route' in **Eindhoven, Netherlands**, is meant to provide a safe, walkable route for children in the neighbourhood. It is marked by signage, and a distinctive coloured and textured path for children to follow. It connects residential areas to schools, parks and playgrounds. It is meant to reduce the age at which independent mobility is attained, and to increase perceived safety for parents.
- The city of **Boulder, Colorado**, has applied the concept to cycling mobility for children and families, ensuring that all spaces frequented regularly by children are connected by protected bike lanes.
- In **Mexico City**, *Liga Peatonal* uses data on road accidents to inform road safety recommendations around schools. They have engaged in tactical urbanism interventions such as signage and playful painting activities at road crossings to create safer routes for children to reach schools.



### RELATED IDEAS

- 2 Urban stories
- 8 Design for play
- 12 Targeted air quality improvements
- 4 Safe, interesting and playful transit
- 5 Pedestrian improvements
- 6 Traffic calming
- 7 Protected bike lanes
- 2 Chief child development officer



### LEARN MORE

- *Play Everywhere Playbook* by KaBOOM

## Idea 4

# SAFE, INTERESTING AND PLAYFUL TRANSIT

**Mobility also implies moments of immobility, which can be opportunities for learning and play.**

Turning a bus stop into a learning experience can be done via messages and stories, or games relying on colours or shapes. Messages can also be included inside the buses or trains to encourage interactions or games. Similarly, enhancing safety at stations and other transport access points – by reducing gaps and allowing for pushchair access, or ensuring shade and lighting – can greatly improve the caregivers' experience and enhance their mobility. This can also be done by ensuring a level of comfort at stations.

Thinking multimodal transit for young children and their caregivers – by providing 'strollable' (stroller-friendly) pavements to reach a public transit station for example – will greatly boost their mobility.

## At a glance...

### COST

\$ \$\$ \$\$\$

### MAINTENANCE

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### GOVERNMENT INVOLVEMENT

- Social Services
- Education
- Health
- Parks
- Planning
- Transport

### MINIMUM SCALE

Neighbourhood



### EXISTING IMPLEMENTATION LEVEL

Tested and implemented

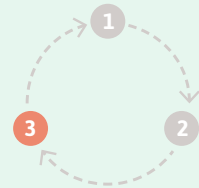
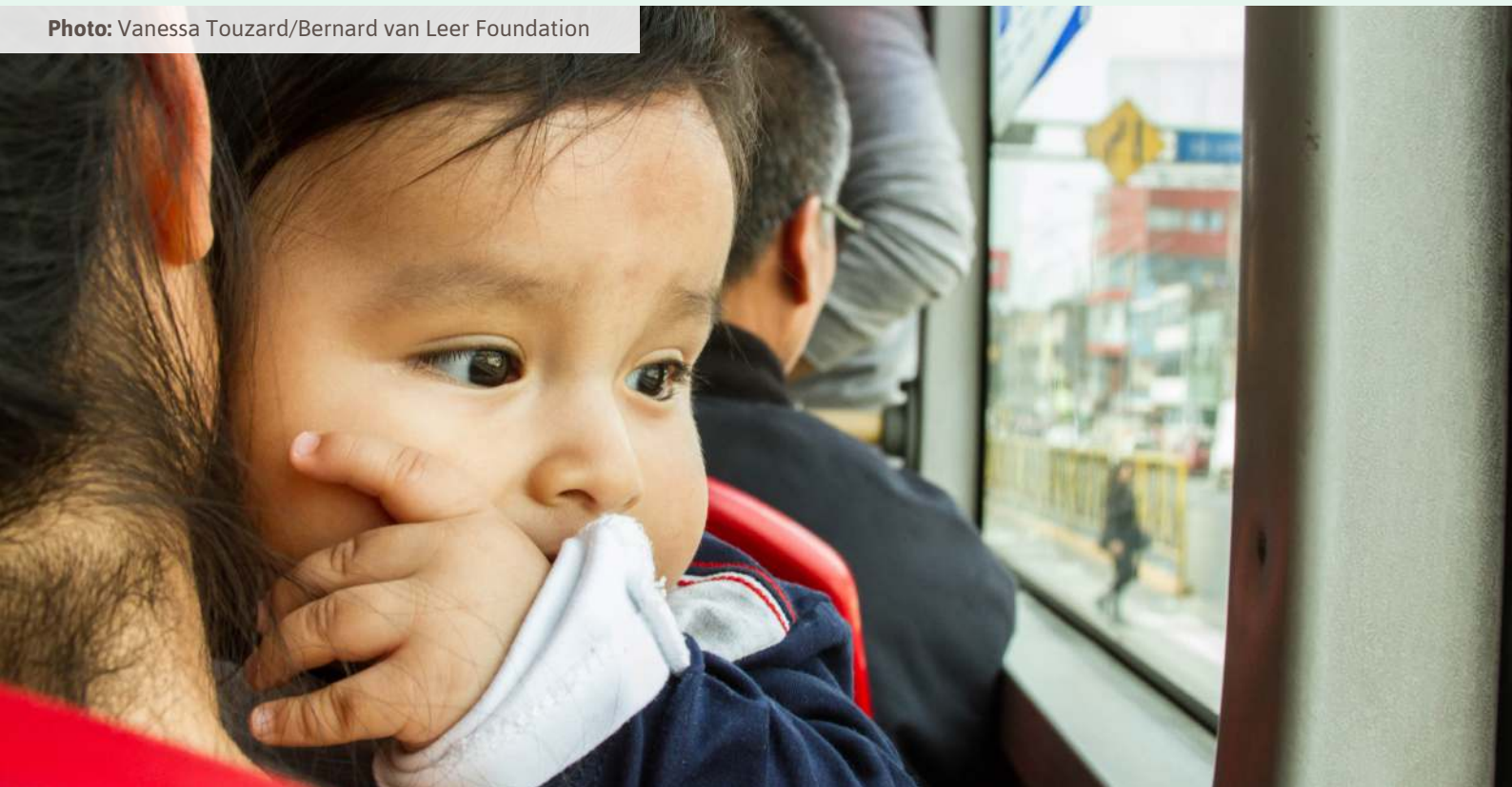


Photo: Vanessa Touzard/Bernard van Leer Foundation





## More info...



### OUTCOME AREAS

- Reduced cost and average time to reach healthcare, childcare, preschool, green space and a source of healthy food
- Reduced caregiver stress and isolation
- Improved access to early childhood services



### REAL WORLD EXAMPLES

- The Urban Thinkscape Project in **Philadelphia, USA**, focuses on maximising opportunities for play throughout the public space. This includes playful bus stops with puzzles and street lighting projecting animated stories on the pavements.
- ITDP's Gold Standard for Bus Rapid Transit systems requires, among other factors, to ensure pushchair accessibility for all buses and stations, defined as a gap of no more than 1.5 cm (vertical) and 10 cm (horizontal) between the bus and the platform. There are gold-standard BRT systems in **Yichang, China**; **Belo Horizonte, Brazil**; **Bogotá, Colombia**; and **Dar-es-Salaam, Tanzania**.
- The city of **Melville, Australia**, has an artistic programme named 'Adopt a bus stop' which encourages and funds artists, students and community groups to turn a bus stop into a local landmark. Some bus stops have been decorated with educative paintings for children, reflecting a nearby school's curriculum. These interventions could be adapted for young children.
- **Medellín, Colombia**, introduced safe routes for preschoolers who live in neighbourhoods with high levels of violence. Children walk to school together with a group of adults, playing games and accompanied by music.



### RELATED IDEAS

- 1 Pop-up play
- 2 Urban stories
- 5 Temporary play streets
- 8 Design for play
- 5 Pedestrian improvements
- 6 Traffic calming
- 3 Data dashboards



### LEARN MORE

- *Play Everywhere Playbook* by KaBOOM
- *Global Street Design Guide* by the National Association of City Transportation Officials (NACTO)

## Idea 5

# PEDESTRIAN IMPROVEMENTS

**Increasing pavement width, walkability and 'strollability' – walking while pushing a pushchair – increases opportunities for interaction and play, and reduces the likelihood of collisions and injuries.**

It provides more time to catch a toddler who runs off towards the street and allows for a more comfortable walk during which caregivers and kids are less stressed and more likely to use the time for positive interactions. Ensuring that pavements remain free from obstructions (cars, stalls), and comfortable (shade, benches) is crucial, and requires maintenance and enforcement of regulations in addition to design interventions. Interventions can easily be tested temporarily first.

Finally, by ensuring a walkable connection between the places where young children and caregivers go frequently (health clinic, childcare, park or playground), cities encourage physical activity, reduce stress and increase quality of life.

## At a glance...

### COST

\$ \$\$ \$\$\$

### MAINTENANCE

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### GOVERNMENT INVOLVEMENT

- Social Services
- Parks
- Education
- Planning
- Health
- Transport

### MINIMUM SCALE

Neighbourhood



### EXISTING IMPLEMENTATION LEVEL

Tested and implemented

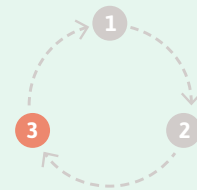


Photo: Courtesy of @petemilnes



## More info...



### OUTCOME AREAS

- Reduced cost and average time to reach healthcare, childcare, pre-school, green space and a source of healthy food
- Reduced caregiver stress and isolation
- Increased instances of caregivers who walk or bike with young children
- Reduced traffic-related deaths and injuries
- Improved access to early childhood services



### REAL WORLD EXAMPLES

- In **Copenhagen, Denmark**, *woonerfs* (or shared streets where pedestrians have legal priority over motorists) increase safety, but also teach young children about navigating public space. Different textures and materials for the floor encourage children towards certain spaces or deter them.
- In **Eindhoven, Netherlands**, and **San Francisco, California, USA** dedicated children's routes linking schools, parks and playgrounds in residential neighbourhoods are made visible via colourful signs and paint.
- In the **City of London, UK**, the Bankside Boardwalk installation is a wooden, levelled, and temporary (six months) extension of the pavement onto the street in response to a need for more pedestrian space. Adaptable, colourful and potentially playful, the intervention includes benches, increases space for pedestrians in a pushchair-friendly way (no change of level) and contributes to lower traffic speed by reducing car space.



### RELATED IDEAS

- 5 Temporary play streets
- 1 Safer street crossings
- 3 Children routes
- 4 Safe, interesting and playful transit
- 6 Traffic calming
- 7 Protected bike lanes
- 3 Data dashboards



### LEARN MORE

- *Global Street Design Guide* by the National Association of City Transportation Officials (NACTO)
- *Pedestrians First, tools for a walkable city* by the Institute for Transportation and Development Policy (ITDP)
- *Play Everywhere Playbook* by KaBOOM

## Idea 6

## TRAFFIC CALMING

**Reducing car speed (via regulation, speed bumps, modified street patterns) increases safety for all, and especially young children.**

It also reduces their exposure to air pollution and frees up public space. Traffic calming or complete interruption on a temporary basis is a good way to start. Increased pedestrianisation of streets also has some ancillary benefits, such as increased business for local shops and more 'eyes on the street'. Slower traffic also means an increased perception of safety and reduces caregiver stress.

## At a glance...

## COST

\$ \$\$ \$\$\$

## MAINTENANCE

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## GOVERNMENT INVOLVEMENT

- Social Services
- Parks
- Education
- Planning
- Health
- Transport

## MINIMUM SCALE

Street



## EXISTING IMPLEMENTATION LEVEL

Tested and implemented

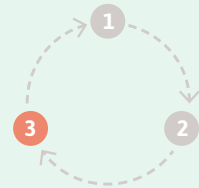


Photo: Vanessa Touzard/Bernard van Leer Foundation



## More info...



### OUTCOME AREAS

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- Improved air quality
- Reduced traffic-related deaths and injuries



### REAL WORLD EXAMPLES

- In **Kigali, Rwanda**, has banned cars from its city centre and has monthly car-free days, complemented by city-supported sports. Similarly, the car-free mornings every Sunday in the two main central thoroughfares in **Jakarta, Indonesia**, have become a hugely popular tradition. Families flock to make use of this newly available public space by walking, biking or simply gathering. **Paris, France** has launched car-free Sundays once a month and has seen an increase in public space usage and a reduction in levels of air pollution. It is now expanding the geographical scope and frequency of the event.
- A review of 600 traffic-calming schemes (road narrowing, frequent pedestrian crossings, cycle tracks) in **Denmark** indicates a reduction of 43% in casualties compared with untreated areas.
- Closing streets is a common form of traffic calming. **Mexico City** regularly does so near schools in disadvantaged areas. In **Libreville**, a project called *Closing Streets for Children to Play* creates a safe space for children to play where outdoor play space is lacking. **New York City** created a programme to close streets adjacent to schools that lacked playground areas during school break times. **Manaus** has a programme to close streets at certain hours of the day and transform them into playgrounds.
- In **Ciudad Bolivar, Bogotá, Colombia**, local community engagement structures and city government identified the most dangerous traffic intersection. Families gathered to paint playful shapes on the pavement and local stories on the walls, raising awareness for families about the risk in this space. Next steps include engaging the Department of Transportation to introduce permanent traffic-calming measures.
- **Barcelona, Spain**, is rethinking its urban layout through the Superblock project. It has closed car traffic on some streets, so cars are now only allowed on main arteries, and inner streets are available for other activities such as play, programming, greening, cycling and walking.



### RELATED IDEAS

- 5 Temporary play streets
- 1 Protected bike lanes
- 3 Safer street crossings
- 4 Children routes
- 7 Safe, interesting and playful transit
- 3 Data dashboards



### LEARN MORE

- *Cities Safer by Design* by the World Resources Institute's Ross Centre for Sustainable Cities
- *Global Street Design Guide* by the National Association of City Transportation Officials (NACTO)
- *Pedestrians First, tools for a walkable city* by the Institute for Transportation and Development Policy (ITDP)

## Idea 7

# PROTECTED BIKE LANES

Segregated cycle lanes are good for biking in general, but even more critical for encouraging caregivers riding with babies and toddlers on their bikes or toddlers using a solo bike for the first time.

They have a strong impact on reducing stress levels for caregivers through an increased perception of safety. By fostering healthy habits in children from an early age, bike lanes have a positive impact on air quality.

## At a glance...

### COST

\$ \$ \$ \$ \$

### MAINTENANCE



### GOVERNMENT INVOLVEMENT

- Social Services
- Parks & Recreation
- Education
- Planning
- Health
- Transportation

### MINIMUM SCALE

City



### EXISTING IMPLEMENTATION LEVEL

Tested and implemented

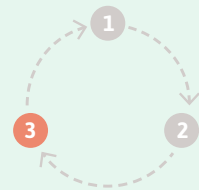


Photo: Oded Antman/Bernard van Leer Foundation



## More info...



### OUTCOME AREAS

- Reduced cost and average time to reach healthcare, childcare, preschool, green space and a source of healthy food
- Reduced caregiver stress and isolation
- Increased instances of caregivers who walk or bike with young children
- Improved air quality
- Reduced traffic-related deaths and injuries
- Improved access to early childhood services



### REAL WORLD EXAMPLES

- In the **Netherlands**, bike lanes are a minimum of 2.5 metres wide, and are typically widened at junctions for increased safety, allowing more room for cyclists with young children. Additionally, physically separating bike lanes from other traffic encourages parents to cycle with their children, because of their perception of increased safety.
- In **Melbourne, Australia**, bike lanes are separated from traffic by car parks. The city also has developed long-term cycling and walking plans.
- In **Boulder, Colorado, USA**, the bike lane network leads to areas where children and their parents are likely to go to, such as playgrounds, parks and schools.
- In **Turin, Italy**, the citizens organisation *Che aria Respiro* is pushing for better cycling infrastructure as part of its demands for cleaner air. Focusing on disadvantaged neighbourhoods, they have organised a 'bike pride' event and regular workshops to raise awareness of the importance of soft mobility – walking and cycling – and its need to be baby-friendly.
- In **Santiago, Chile**, the city is using the river Mapucho's path through the city centre to place a protected bike lane on its banks. The bike lane is 30 km long and completely separated from traffic and allows easy and safe movement through the city.



### RELATED IDEAS

- 10 A tree for every baby
- 12 Targeted air quality improvements
- 4 Safe, interesting and playful transit
- 5 Pedestrian improvements
- 6 Traffic calming



### LEARN MORE

- *Cities Safer by Design* by the World Resources Institute's Ross Centre for Sustainable Cities
- *Global Street Design Guide* by the National Association of City Transportation Officials (NACTO)

## Idea 8

# EVERYTHING NEARBY

When establishing new service facilities such as childcare or health clinics, thinking about proximity is important – and favouring denser but smaller service provision is ultimately better for young children and caregivers to access them.

In already urbanised areas where building new facilities may be complex, one possibility is to use existing private spaces for the municipality to provide a service. In this way, municipalities can rapidly increase density and coverage of children's service provision.

This notion of proximity is especially relevant to reducing travel time and stress for parents from poorly equipped (often informal) neighbourhoods, as well as in new developments where space can be reserved at the outset.

## At a glance...

### COST

\$ \$ \$ \$ \$

### MAINTENANCE



### GOVERNMENT INVOLVEMENT

- Social Services
- Parks
- Education
- Planning
- Health
- Transport

### MINIMUM SCALE

Neighbourhood



### EXISTING IMPLEMENTATION LEVEL

Tested and implemented

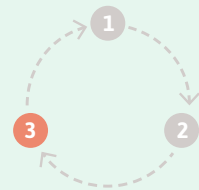


Photo: Courtesy of proyecto aUPA





## More info...



### OUTCOME AREAS

- Reduced cost and average time to reach healthcare, childcare, preschool, green space and a source of healthy food
- Reduced caregiver stress and isolation
- Increased instances of caregivers who walk or bike with young children
- Improved access to early childhood services



### REAL WORLD EXAMPLES

- In **Maranhão, Brazil**, 17 cities are using private homes as meeting points for pregnant women and health workers. Locations are chosen to be close enough for the parents-to-be to arrive on foot. This results in fewer missed prenatal visits and more time spent helping mothers and fathers think through what steps they can take – before and after the birth – to help children thrive.
- For decades, the **Colombian** government has run home-based childcare programmes set up in local homes, but financed and regulated by the government. This strategy has increased the proximity of childcare to where parents live even in high-density neighbourhoods.
- In **Antwerp, Belgium**, the *Kleuters in de voortuin* project reclaims small areas to create playable nature spaces everywhere, so that children can access nature easily rather than having to travel to large playgrounds further away.
- In **Tucumán, Argentina**, the project *Filling urban voids* has introduced parenting-friendly pop-up urban furniture in 1200 small abandoned spaces in the city. These spaces are self-managed by local communities and increase the proximity of family-friendly places throughout the city.
- The Kidogo project in **Kibera**, one the largest informal settlements in **Nairobi, Kenya**, builds capacity for mothers to provide higher-quality, sustainable childcare micro-businesses, based in their homes.



### RELATED IDEAS

- 6 Opening public facilities out of hours
- 2 Subsidised public transport
- 1 Priority access to services for young families
- 2 Neighbourhood directories for early childhood services
- 4 Parent coaching bundled with health services