S.M.ALL Action Planning Network

Children Walk or Cycle to School

PIETRO L. VERGA, URBACT EXPERT







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Planning with and for Children

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The workshop addressed challenges and opportunities in creating safer, more enjoyable, and efficient urban spaces for children to walk or cycle to school. Through interactive activities and expert insights, we discussed how to promote child-friendly planning practices that enhance mobility and inclusivity!

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Introduction

Mobility shapes urban environments and directly impacts quality of life, yet creating inclusive cities requires addressing the needs of all users—especially children. This workshop aimed to explore the key factors influencing mobility choices, such as safety, enjoyability, and efficiency, and how these factors shape the experiences of different road users.

The session began with an expert presentation introducing the parameters driving mobility decisions, emphasizing the unique needs of children. Participants were then divided into two groups: one representing car drivers and the other children walking or cycling to school. Each group analysed images of five roads, evaluating them based on safety, enjoyability, and efficiency. The findings were compared in a plenary discussion, revealing differing perspectives on mobility priorities.

To deepen the understanding of children's experiences, an interactive session utilized a Sli.do poll and expert insights to identify measures for improving child-friendly mobility. Participants reflected on their earlier analyses and suggested practical improvements for the roads evaluated. A subsequent presentation highlighted the importance of involving children in urban planning, with case studies illustrating effective participatory methods that integrate their perspectives into decision-making.

The workshop concluded with an open discussion where participants reflected on the lessons learned throughout the sessions, summarizing key insights on how to better understand and integrate children's needs into urban mobility planning.

Key Parameters Driving Mobility Choices

The way individuals perceive a route is shaped by a complex interplay of factors that influence their travel experience. These factors can be grouped into four key dimensions: **safety**, **efficiency**, **enjoyability**, and **motivation**. Each of these plays a vital role in shaping how people evaluate and choose their routes.

- **Safety** is fundamental to feeling secure and protected while travelling. It encompasses elements that mitigate harm, such as well-maintained roads, adequate lighting, clear visibility, separation from motorised traffic, and adherence to speed limits. The presence or absence of these features can greatly affect whether an individual feels confident and at ease on their journey.
- **Efficiency** determines how convenient and practical a trip is. This includes considerations such as time savings, cost-effectiveness, ease of navigation, and overall comfort. An efficient route allows individuals to reach their destinations quickly and effortlessly, reducing stress and frustration. These factors are particularly important for those with time-sensitive commitments or limited resources.
- **Enjoyability** enhances the quality of the travel experience by making it more pleasant and rewarding. Features such as greenery, aesthetic surroundings, shops, amenities, and opportunities for social interaction (e.g., chatting or meeting others) contribute to this dimension. The vibrancy of the environment, its colours, light, and sensory appeal can turn a simple trip into an enjoyable experience.
- **Motivation** refers to the external and internal factors that influence an individual's decision-making. These might include a desire to contribute to environmental sustainability, stay physically active and healthy, or take advantage of incentives such as motivational campaigns. Awareness and education about the benefits of sustainable or active travel also play a crucial role in shaping preferences.

We therefore understand that route perception is a deeply subjective experience, shaped by individual preferences, social and economic status, physical abilities, and, particularly in the context of planning for children, age. Crucially, what one person values highly—whether it is safety, efficiency, enjoyability, or motivation—may hold less significance for another. For instance, a young professional may prioritise

efficiency and time-saving features, while an elderly individual might focus more on safety and comfort. Similarly, children are likely to place greater importance on safety, playfulness, and enjoyability, reflecting their developmental needs.

These preferences are influenced not only by age but also by physical conditions, social circumstances, and individual values, underscoring the diverse ways people perceive and experience routes. Understanding that route perception is inherently personal allows planners and policymakers to design transport systems and infrastructure that respond to a broad range of needs and expectations. By addressing these dimensions in a balanced and inclusive manner, we can create routes that are not only functional but also inspiring, enjoyable, and accessible for everyone, regardless of their age or background

Looking at the Road through Different Eyes

Against this background, participants were invited to take part in a small role-play exercise using a Miro Board. They were randomly divided into two groups, each impersonating a typical road user: Group 1 represented car drivers, while Group 2 represented children. Both groups were shown pictures of five different roads and asked to analyse them based on three parameters: **safety**, **enjoyability**, and **efficiency**, considering the perspective of their assigned user.

The purpose of the exercise was to explore the differing perceptions and priorities of these two categories of road users. While car drivers might focus on aspects like traffic flow and convenience, children might instead prioritise safety, visibility, and engaging environments. This activity aimed to encourage participants to empathise with the unique concerns of each user type, providing a foundation for better integrating diverse perspectives into the planning process.

Road 1: Ferdinand-Happ Straße, Frankfurt am Main, Germany

Group 1:

The road presents several design flaws that undermine its usability and safety for different types of users. There is no clear cycling path, forcing cyclists, including cargo-bike users, to share lanes with cars, which compromises their visibility and increases the risk of accidents. Crosswalks are poorly marked, making pedestrian crossings unclear and unsafe. Additionally, the minimal height difference between pedestrian pathways and car lanes further exacerbates the safety issues, particularly for children and less mobile users.

The presence of heavy vehicles, such as lorries, was a notable concern. Participants questioned whether such vehicles are even permitted on this road, as they create significant risks for residents and other road users. Another issue identified was the placement of streetlights, which are situated in the middle of pedestrian pathways. This not only obstructs foot traffic but also detracts from the overall usability of the space. Together, these observations paint a picture of a road that is poorly adapted for active mobility and pedestrian needs.

Group 2:

While the road is wide and experiences relatively low traffic, its current design favors vehicles over all other forms of mobility. The absence of traffic-calming measures, such as speed bumps, encourages cars to travel at high speeds, creating a hazardous environment for pedestrians and cyclists. The lack of a dedicated cycle lane further discourages active mobility, leaving cyclists, including cargo-bike users, vulnerable on a road designed primarily for motorized transport.

Pedestrian crossings are another area of concern, as they lack proper protection and are poorly implemented, with "strange" and unclear zebra markings offering little reassurance to those on foot. Heavy goods vehicles regularly transit this residential street, compounding safety concerns for children and families. The road is described as neither safe nor enjoyable for residents, with nothing visually or functionally engaging to make it appealing.

In summary, the road is functional for vehicles, offering an efficient route for motorized transport, but fails to cater to the needs of pedestrians, cyclists, or families. Its current state makes it a space devoid of vitality and interest, with participants calling for features that would make it safer, slower, and more inclusive for all users.

Road 2: Intersection E Broadway and Junipero Ave, Long Beach, California

Group 1:

Group 1 highlighted several shortcomings in road design, particularly its unclear horizontal markings and signals. These design flaws create confusion for users trying to navigate the space. Although visibility itself was not identified as a problem, the lack of clear delineation between areas for different types of users—such as pedestrians, cyclists, and vehicles—was seen as a major drawback. The group felt that the road's design prioritizes vehicles, leaving little thought for active mobility users, such as pedestrians and cyclists.

While the road functions adequately for cars, its current layout was described as inefficient for fostering safe, multi-modal use. The lack of cohesion in the road's infrastructure detracts from its usability, particularly for non-motorized users.

Group 2:

Group 2 framed their analysis around the road's usability and its broader implications for mobility. They acknowledged that the road is efficient for vehicle traffic but critiqued its failure to cater to pedestrians and other non-vehicle users. For example, pedestrian crossings were flagged as unsafe due to insufficient design considerations, leaving walkers feeling unprotected.

Although the road is wide and experiences low traffic, its straight design and lack of traffic-calming measures, such as speed bumps, encourage high vehicle speeds, creating a sense of insecurity for residents. Additionally, participants noted the absence of engaging or interactive features, making the road feel unwelcoming and dull, especially for children and families.

Road 3: Via Giuseppe Bassini, Ponte di Legno, Italy

Group 1:

Group 1 described the road as an unappealing and poorly maintained space, with key concerns around its functionality and safety. They questioned the purpose of a yellow line painted on the pavement, as it was unclear whether it was meant to designate a cycle path or a pedestrian route. This ambiguity points to a broader issue of poor design and lack of clear signalling.

The group also noted drainage issues that could exacerbate damage to the pavement and reduce usability during bad weather. Poor visibility was another major concern, compounded by signals that were not well-positioned to aid navigation or ensure safety. The overall impression was of a neglected road with damaged pavements, creating an environment that is both aesthetically unpleasant and functionally inadequate.

Group 2:

Group 2 echoed similar criticisms, emphasizing the road's lack of safe pedestrian routes and poor street maintenance. They pointed out the complete absence of curbs or sidewalks in some areas, leaving pedestrians without any dedicated or protected space. This, coupled with the low visibility, further diminishes safety for non-motorized users.

The road was described as being efficient only for vehicles, with no consideration given to pedestrians or other forms of active mobility. Participants also noted that the road was unenjoyable and failed to provide a sense of security for its users. These shortcomings make it an unwelcoming space for residents and undermine its potential as a shared urban environment.

Road 4: SP490, Gorra, Italy

Group 1:

Group 1 expressed significant concerns about safety and functionality, describing the road as poorly designed and hazardous for all users. They highlighted a lack of dedicated parking spaces, leading to potential conflicts between vehicles and pedestrians. The ambiguity surrounding whether the road is one-way or two-way adds to the confusion, despite it being a two-way road, as clarified by the moderator.

House entrances and stairs along the road were flagged as unsafe, with no measures to protect pedestrians or residents navigating these areas. Visibility was another critical issue, with poor sightlines increasing the risks for both vehicles and pedestrians. Collectively, the feedback points to a road that lacks basic safety features and fails to provide clarity in its design.

Group 2:

Group 2 echoed many of these safety concerns but provided a more detailed critique of the road's usability and design. They emphasized the lack of dedicated stopping points for cars, leading to disorganized and unsafe parking practices. Pedestrians face significant risks due to the absence of safe walking paths and poorly implemented crossings, particularly those with low visibility. Participants noted that the pedestrian crossing was "absolutely not safe," reinforcing the road's inadequacy for non-motorized users.

While the group acknowledged that the road has potential as a pleasant walking area, they pointed out that it is unsuitable for vehicle flow and dangerous for residents. Visibility challenges were also noted, both for drivers and pedestrians, contributing to a general sense of insecurity and confusion about the road's intended use.

Road 5: Brückenstraße, Frankfurt am Main, Germany

Group 1:

Group 1 highlighted several structural and design flaws that hinder the road's accessibility and functionality. Large waste infrastructures, such as oversized trash cans, were seen as obstacles to mobility, cluttering pedestrian areas and reducing their usability. The lack of a noticeable height difference between pedestrian and vehicle spaces was flagged as a critical issue, blurring the boundaries between zones and creating potential safety risks. Additionally, the presence of one-meter-high pylons was critiqued as ineffective, offering little utility or protection in the current design.

These observations point to a road environment that lacks thoughtful planning, particularly regarding pedestrian safety and the separation of spaces, leading to an inefficient and obstructed urban layout.

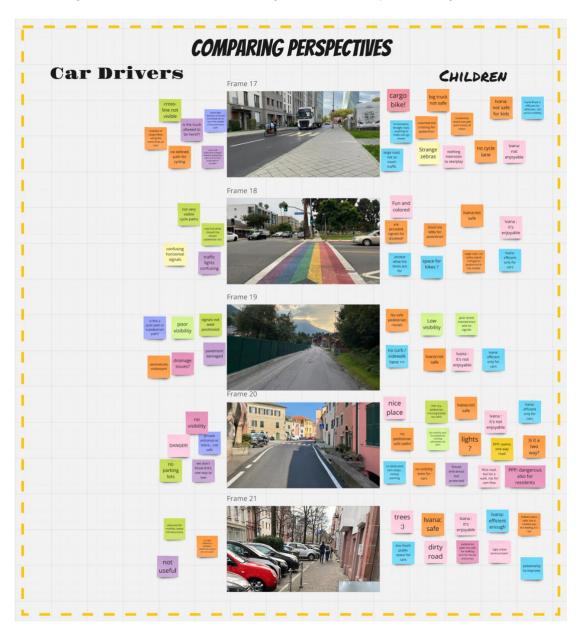
Group 2:

Group 2 provided a mixed perspective, acknowledging some positive aspects while critiquing the road's broader usability and aesthetics. They noted that the road allocates too much space to cars, limiting opportunities for pedestrian-friendly or community-focused features. However, the presence of trees was appreciated as a positive element, offering potential for further improvements.

The pedestrian path was described as unsafe, both for walking and for accessing house entrances, and the general cleanliness of the road was called into question. Despite these issues, the group remarked that the road feels "safe enough" in practice but gives off a perception of insecurity due to its unattractive and disorganized urban environment. While the road was noted to be "enjoyable" and "efficient enough" in its current state, participants emphasized its potential for improvement through better design and allocation of space.

General Conclusions from the Exercise

The exercise revealed distinct priorities and concerns based on the perspectives each group embodied: Group 1, representing car drivers, and Group 2, representing children. This dynamic shaped their observations, offering a multi-faceted understanding of road usability and design.



Group 1 Perspective (Car Drivers):

Group 1 focused on the functionality and efficiency of the roads for vehicles, identifying practical issues that hinder safe and smooth driving. Their concerns often revolved around unclear road markings, poor visibility, and ambiguous design elements, such as whether roads were one-way or two-way. They also noted the absence of clear boundaries between pedestrian and vehicle zones, which they saw as contributing to potential accidents or inefficiencies for drivers.

While their primary lens was that of a vehicle user, they acknowledged safety risks stemming from these ambiguities and poor maintenance. However, their feedback was less concerned with livability or the experience of non-motorized users, focusing instead on how road design impacts driving and general functionality.

Group 2 Perspective (Children):

Group 2, representing children, approached the roads from a safety and accessibility perspective, emphasizing the vulnerability of non-motorized users. They were particularly concerned with pedestrian crossings, the lack of safe walking paths, and areas where the absence of curbs or poorly designed infrastructure exposed children to risks.

Their feedback also reflected emotional and experiential dimensions, describing roads as "not enjoyable" or "unwelcoming." They frequently criticized the excessive allocation of space to vehicles and the lack of interactive or engaging elements, such as play areas or greenery, which would make the environment more inviting for children and families. Even when roads were deemed "safe enough," the perception of insecurity persisted due to unattractive or disorganized designs.

Key Insights and Shared Concerns:

Despite their differing perspectives, both groups identified common issues:

- **Safety**: Both groups noted poor visibility and unprotected pedestrian crossings as critical risks.
- **Design Ambiguities**: Confusion over the intended use of spaces—whether for cars, pedestrians, or cyclists—was a recurring theme.
- **Neglect of Active Mobility**: Both groups criticized the lack of infrastructure supporting walking or cycling, though Group 2 voiced this concern more strongly.
- **Maintenance Issues**: Poor upkeep, including damaged pavements, drainage problems, and disorganized parking, were flagged by both groups as significant shortcomings.

Conclusion:

The exercise demonstrated that road design often prioritizes vehicle efficiency at the expense of safety and inclusivity for vulnerable users, such as children. Group 1, as car drivers, stressed functional clarity and efficiency, while Group 2, as children, focused on safety, enjoyment, and a sense of security. Together, these perspectives underscore the need for a balanced approach to road design that ensures functionality for vehicles while creating safe, inclusive, and engaging spaces for pedestrians, cyclists, and families. Addressing these concerns holistically can lead to urban spaces that cater to the diverse needs of all users.

Understanding Children's Perspective

Building on the reflections and outcomes of the previous exercise, participants were shown a short video shot at children's eye level (approximately 95-100 cm from the ground) to experience children's perceptions

firsthand. This approach allowed participants to empathize with how children navigate urban environments. Following the video, participants engaged in a reflective exercise through a sli.do word cloud to address two key questions:

- What are the most important aspects influencing road safety for children?
- What en-route aspects positively influence children's route perceptions?

The first word cloud addresses the question, "What are the most important aspects influencing road safety for children?" and emphasizes a clear focus on safety and visibility. Key terms like "Large visibility", "Lights", and "Protected areas" highlight the critical need for clear sightlines, good lighting, and physical safety measures to ensure children feel secure on the road. Additionally, "Separating the paths" and "Wide sidewalks/cycle lanes" point to the importance of well-defined infrastructure that minimizes conflict between pedestrians, cyclists, and vehicles. Participants also recognized the role of maintenance and clarity, with mentions of "Good maintenance" and "Barriers" ensuring that routes are not only safe but also functional. While the word cloud is heavily safety-oriented, elements like "Interactive elements" and "Colours" suggest that engagement and visual features also contribute, albeit to a lesser extent, to children's confidence and comfort in navigating routes. In summary, safety and functionality dominate participants' priorities when considering road safety for children, with visibility, infrastructure, and protection emerging as key concerns.

The second word cloud answers the question, "What en-route aspects positively influence children's route perceptions?" and shifts the focus towards enjoyment, space, and interactivity. While safety remains a factor with mentions of "Lights" and "Police", participants highlighted elements that enhance the experience of the route, such as "Interactive elements", "Colours", and "Space and grass". These features contribute to creating routes that are not only functional but also visually appealing and engaging for children. Space and infrastructure are equally important in shaping positive perceptions, with terms like "Large pavements", "Wide sidewalks/cycle lanes", and "Walkpaths that are large" emphasizing the need for ample, accessible pathways that offer comfort and room for movement. Aesthetic and design features, such as "Colored routes" and "Perspective", further enhance the overall experience, making the routes feel welcoming and enjoyable. In conclusion, while safety is foundational, children's route perceptions are strongly influenced by the presence of space, interactivity, and visual appeal. This highlights the need for roads that are not only secure but also stimulating, turning routine journeys into enjoyable experiences.

After the brainstorming exercise, participants were presented with findings from Marquart and Schicketanz (2022), which highlighted key aspects influencing safe and healthy walking and cycling in urban areas.

ASPECTS INFLUENCING PERCEIVED SAFETY AND ROUTE EXPERIENCES

	Cyclist commuters in Berlin	Children's AST in Leipzig
En-route aspects influencing perceived safety	 High traffic volume Traffic lights / intersections Past-experiences (nearly-crashes) Visibility (intersections) Overtaking maneuvers High tensions/ concentration Sudden doors opening 	 Large intersections Waiting at traffic lights Short green phases Limited visibility of children Narrow sidewalks Cobbled streets Stranger danger
En-route aspects influencing route perceptions	 Vegetation (e.g. allotment gardens) Water Seeing animals Seasons changing Smell of water/nature Interesting sites (e.g. aesthetic, shops, people) 	 Bakeries/supermarkets "Secret paths" Interesting sites (e.g. bridge, construction site) Frozen puddles/streams Trees

source: Marquart and Schicketanz, 2022

The table provided an opportunity to compare participants' reflections with empirical evidence. The research identified barriers such as high traffic volumes, poor visibility, narrow sidewalks, and a lack of safe pedestrian crossings—aligning with the participants' emphasis on safety, visibility, and infrastructure in the first word cloud. Additionally, Marquart and Schicketanz's findings highlighted the positive influence of elements like bakeries, "secret paths," and visually engaging features, which closely mirrored participants' focus on interactivity and aesthetics in the second word cloud.

This comparison provided a valuable foundation for the next exercise, where participants were invited to explore and discuss potential measures to make the five previously analyzed roads more child-friendly.

What Makes a Road Children-Friendly?

Participants were tasked with identifying and proposing measures to make the five previously analyzed roads more child-friendly. Building on their earlier reflections and insights, they suggested a variety of interventions aimed at improving safety, accessibility, and engagement for children using these spaces. A recurring theme was the enhancement of infrastructure, with proposals for creating or improving **pavements** and **bike lanes**, as well as ensuring **protected pedestrian routes** with barriers to separate pedestrians from vehicles. Participants also recommended designating **waiting areas for cyclists** at intersections to improve safety and navigation.



To address traffic-related risks, participants suggested reducing or banning **heavy vehicle traffic** in residential or child-heavy zones, introducing **one-way streets**, and implementing **speed limits** to calm traffic. In some cases, they proposed the removal of parking spaces to prioritize pedestrian safety and movement. Improving **signage and visibility** was another key focus, with recommendations for better **road markings**, **traffic lights**, and overall **signal organization** to aid all road users.

Beyond functional improvements, participants emphasized the need for **aesthetic and interactive features** to make roads more appealing for children. Suggestions included incorporating **interactive elements** along sidewalks and introducing **colorful and creative designs**, such as vibrant crosswalks, to enhance both visual interest and child-friendliness. In areas with severe structural issues, participants advocated for **comprehensive road redesigns**, which included addressing damaged infrastructure, improving layouts, and integrating **green spaces** to create more inviting environments.

Overall, the proposals reflected a holistic approach, focusing on **safety**, **accessibility**, and **engagement**. These solutions aimed to transform the roads into inclusive spaces that cater to children's needs while enhancing usability for all users. This exercise provided a foundation for reimagining urban spaces as not just functional routes, but environments that encourage exploration, activity, and safety for young and vulnerable users alike.

Planning WITH and FOR Children

In the final session, participants explored the importance of planning both **with** and **for** children, focusing on inclusive approaches to integrating their perspectives into urban design processes. Research highlights that children between the ages of 7 and 12 are capable of addressing a wide range of issues, extending beyond the schoolyard to the neighbourhood as a whole. Their understanding of supportive structures is **multidimensional** and often rooted in the **here-and-now perspective**, reflecting their immediate experiences and interactions with their environment.

Children's participation often occurs in the **context of play**, which shapes how they engage with their surroundings and contribute to planning processes. By leveraging this context, planners can access the unique insights children bring to understanding and designing urban environments. Additionally, it was highlighted that children's participation profits from a combination of **action**, **communication**, **and research**, ensuring that their voices are not only heard but meaningfully incorporated into the planning process.

Children define supportive structures across several dimensions. The **ecological dimension** includes elements such as greenery, forests, clean air, and wildlife. The **physical dimension** encompasses low-rise buildings, open spaces, safe roads and streets, playgrounds, and even informal areas like wasteland. The **functional dimension** prioritises opportunities for activities such as hobbies, play, work, and participation. Psychosocial and organisational aspects emphasise the importance of peers, friendly adults, collaboration across age groups, and institutional support. Additionally, children value abstract characteristics like **safety, beauty, communality, and ethics**, demonstrating a **rationality of care and responsibility** that contrasts with the technocratic and instrumental rationality often seen in urban planning.

The session introduced participants to a **three-step framework** for planning with children:

-) Identifying the problem(s): Engaging with children to understand the challenges they experience in their environments.
- **Designing solutions:** Encouraging children to brainstorm and suggest practical interventions for addressing these challenges.

Co-creating measures: Collaborating with children to refine and implement these solutions, ensuring they align with children's needs and priorities.

To support this framework, participants explored a range of **tools and methods** tailored for engaging children:

- **Diagnostic methods**, which evaluate personal, environmental, and situational factors influencing children's experiences.
- **Expressive methods**, such as drawing, storytelling, and modelling, which enable children to share their ideas creatively and effectively.
-) **Situational methods**, including futures workshops, democratic dialogues, and exhibitions, which facilitate collaborative exploration and co-creation of ideas.

The session also included practical examples of these approaches in action. The **UIA SPIRE Baia Mare project** was presented as a case study demonstrating how participatory planning can transform urban spaces, integrating children's voices into sustainable and inclusive designs. Additionally, the use of **Minecraft** illustrated how gamification can enable children to co-create urban environments, bridging the gap between professional planning and children's perspectives.

By grounding planning in the **here-and-now orientation** of children and leveraging the **context of play**, urban spaces can become more inclusive, engaging, and reflective of children's needs. This session reinforced the value of moving beyond consultation to genuine co-creation, ensuring that children's participation—fostered through a combination of **action**, **communication**, **and research**—is integral to the design of urban environments that are safe, functional, and inspiring.

Conclusions and Main Takeaways

The workshop concluded with participants reflecting on their key takeaways, which underscored the importance of adopting a holistic and inclusive approach to planning **with** and **for** children. A recurring theme was the need to embrace the **child's perspective**, recognising children as active participants in shaping their environments. Participants highlighted the principle of working "**with kids**, **not for kids**," ensuring their voices and ideas lead the way in co-creation processes.

The importance of multidimensional planning emerged strongly, with participants noting the need to **plan with all senses**, acknowledging that urban spaces should cater not only to functional needs but also to emotional, sensory, and aesthetic experiences. The concept of **coloured planning** and incorporating play into the process were highlighted as ways to make planning more engaging and relevant for children. Additionally, the idea of **planning services too** was a reminder to consider the broader context of infrastructure and resources that support children's mobility and well-being.

Participants also recognised the diversity of urban challenges, agreeing there is **no unique solution** to creating child-friendly environments. Instead, planning should involve exploring multiple perspectives and strategies, including addressing societal issues such as the persistence of a **car addiction** that impacts urban design. The session also stressed the importance of integrating **education** into the planning process to foster long-term understanding and ownership among both children and adults.

In conclusion, the workshop reinforced that creating child-friendly urban spaces requires collaboration, creativity, and a willingness to prioritise children's needs and aspirations. By planning with care, inclusivity, and imagination, cities can become safer, more inspiring, and truly shared environments for all.

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