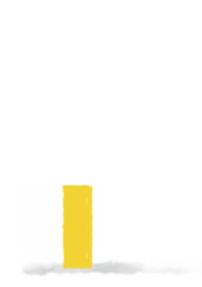




Handbook

Co-designing built interventions with children affected by displacement (DeCID)





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☰ Table of content

02 Key messages

04 Acknowledgements

05 Project partners

06 Introduction

- 08 Why a handbook?
- 08 Who is this handbook for?
- 09 How to use it?
- 10 Key terms



14 Key concepts

- 16 I - child wellbeing
- 17 II - children in urban settings affected by displacement
- 23 III - child responsive built interventions
- 25 IV - co-design with children



28 Hands-on

A

30 Designing with children

- 32 Step 1 - Generating an idea
- 36 Step 2 - Building partnerships
- 46 Step 3 - Funding
- 50 Step 4 - Researching local context and needs
- 62 Step 5 - Translating children's ideas into design solutions
- 76 Step 6 - Selecting the intervention location
- 79 Step 7 - Choosing materials, skills and technologies
- 86 Step 8 - Technical design



B

89 Procurement and building

- 90 Step 9 - Procurement and management of building works
- 94 Step 10 - Practitioners and communities build together



C

99 Post building, impact, and sustainability

- 100 Step 11 - Activation, ownership and management
- 102 Step 12 - Maintenance and follow-up
- 105 Step 13 - Impact and evaluation

110 Bibliography





Key Messages

Displacement is at a world record high as a result of persecution, conflict, violence, and human rights violations. Children make up around half of the refugee population worldwide, and 40% of the 80 million displaced people globally. Approximately two-thirds of displaced people live in urban areas, the large majority in developing countries (UNHCR 2020). The quality of spaces available to children has an important impact on child development and wellbeing as it affects a number of children's rights including play, health, safety and learning.

Co-designing built interventions with children affected by displacement can:

- **empower children** and have a lasting positive impact;
- **improve social cohesion, inclusion, social capital, and integration** between refugee and host communities, and within the refugee community;
- have a **positive impact on the local economy, build capacity and provide employment**; and
- deliver **better social infrastructures** (child-friendly urban public spaces, including open public spaces, streets and public facilities such as schools and playgrounds) for children and their communities.

Despite their impact, there is an undersupply of built interventions that have been co-designed with children. This is because: they require professionals from different specialisms to work together, and often organisational structures do not make these collaborations easy; their additional value is difficult to recognise; and they require a larger initial investment compared to the built product alone. Furthermore, these interventions often present multiple operational challenges linked to safeguarding, cultural norms and appropriateness. This prevents many organisations from taking on such projects, despite the strong need for children's voices to be part of design responses in displacement contexts.

The DeCID handbook was born out of a lack of practical guidelines for co-designing built interventions with children affected by urban displacement. It was created by a mixed team of practitioners and academics from different disciplines, and via a research process involving interviews and thematic discussions with varied related practitioners.

This handbook aims to raise the number and quality of built interventions that have been co-designed with children affected by displacement in the urban context: ultimately advancing their wellbeing. It provides practical insights regarding interventions that put children's wellbeing first, and at the intersection of participatory design, forced displacement, and the urban context.

Starting up: from idea to partnership

- Ideas originate in a variety of ways and from different actors.
- Children must be at the centre of developing ideas for interventions.
- Children and their communities must be considered partners in interventions.
- As built interventions co-designed with children require different functions, roles and capacities, complementary actors need to work in partnership.
- The expertise required draws upon different disciplines, but should find a common language.

Translating children's ideas into design solutions

- In-depth knowledge of the local context and needs enables practitioners to develop context-appropriate interventions.
- Children must be at the centre of the co-design process.
- The process of designing spaces with children requires careful planning and the preparation of tools appropriate to the context and the participants.
- The process must equip children with the knowledge needed to fully participate.
- A careful and participatory selection of sites for interventions is essential for ensuring their positive impacts on children and long-term sustainability.
- The choice of materials and technologies can generate positive impacts and empower the local community.
- Purchasing materials locally, hiring local labour and adopting context appropriate technologies can help boost local economies and improve social cohesion.
- The technical design should enable the hiring of local labour and children's participation during the construction phase.

Procurement and building

- Procurement and site supervision must guarantee the safety and wellbeing of workers and children.
- Carefully planned procurement can boost the local economy, improve livelihoods and social cohesion.
- It is important to work with contractors and suppliers to develop context appropriate procedures for managing building works.
- Building with children and communities is an empowering experience that requires careful planning.

Post building, impact, and sustainability

- Full ownership of a space by children and their communities, as well as a clear management structure involving relevant stakeholders (e.g. local government), contribute to long-term sustainability.
- Careful design and procurement reduce costs and the need for maintenance, as skills and materials are available locally.
- Built interventions co-designed with children make an impact through both their physical output and implementation process.
- The value for money of co-designed built interventions must be assessed by considering the multiple short- and long-term impacts, including the social impact of the process itself.
- The allocation of adequate time and resources for evaluating interventions and their long-term impact can contribute to learning.
- Children and their communities must be part of the evaluation process.

Acknowledgements

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Contributions and inputs

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Project partners

This handbook has been written by the DPU and CatalyticAction with a thorough review and inputs from UN-Habitat and UNICEF.

 **UNICEF** works in the world's toughest places to reach the most disadvantaged children and adolescents – and to protect the rights of every child, everywhere. Across more than 190 countries and territories, we do whatever it takes to help children survive, thrive and fulfil their potential, from early childhood through adolescence. The world's largest provider of vaccines, we support child health and nutrition, safe water and sanitation, quality education and skill building, HIV prevention and treatment for mothers and babies, and the protection of children and adolescents from violence and exploitation.

Before, during and after humanitarian emergencies, UNICEF is on the ground, bringing lifesaving help and hope to children and families. Non-political and impartial, we are never neutral when it comes to defending children's rights and safeguarding their lives and futures.

 **UN-Habitat**'s vision of "a better quality of life for all in an urbanizing world" is bold and ambitious. UN-Habitat works with partners to build inclusive, safe, resilient and sustainable cities and communities. UN-Habitat promotes urbanization as a positive transformative force for people and communities, reducing inequality, discrimination and poverty. UN-Habitat works in over 90 countries to promote transformative change in cities and human settlements through knowledge, policy advice, technical assistance and collaborative action.

 **DeCID** is a project funded by the Grand Challenge Research Fund (GCRF), a UK Government fund to support cutting-edge research that addresses the challenges faced by developing countries. DeCID builds on the experience of CatalyticAction and previous collaborative work between them and the Bartlett Development Planning Unit (DPU) at University College London. The project is led by Principal Investigator Dr Andrea Rigon, an Associate Professor at the DPU with more than 15 years' experience of citizen participation in international development and urban development, having worked for international NGOs, academia, and consulted for the United Nations, international donors and governments.

 **The Bartlett Development Planning Unit** (DPU) at University College London conducts world-leading research and postgraduate teaching that helps to build the capacity of national governments, local authorities, NGOs, aid agencies and businesses working towards socially just and sustainable development in the global south. The DPU is part of The Bartlett faculty, ranked #2 in the world for built environment subjects in the renowned QS World Ranking 2021. It has over 65 years of experience in academic teaching, research, policy advice and capacity building in the field of international development.

As part of its mission to build the capacity of professionals and institutions, the DPU undertakes a range of action-oriented work with partners in different parts of the world. Regular contact with policy and planning practice through capacity building and advisory work is viewed as an important part of challenging and developing the theoretical and methodological debates pursued in our teaching and research.

 **CatalyticAction** is a UK based charity that works to empower vulnerable children and their communities through participatory built interventions. They champion the co-production of dignified built environments where everyone can take part in the creation of equitable, inclusive and sustainable communities. Through this process of co-design, CatalyticAction builds local human capacity that ensures their work has a lasting impact. CatalyticAction's work has a direct positive impact on: children's wellbeing, social cohesion, local economy, local capacity and the built environment. CatalyticAction was shortlisted for the prestigious Aga Khan Award for Architecture 2017-2019, and bronze winner of the Regional LafargeHolcim Awards 2017 Middle East Africa.

 **University College London** (UCL) is London's leading multidisciplinary university, with more than 13,000 staff and 42,000 students from 150 different countries. Founded in 1826 in the heart of London, UCL was founded to open up education to those who had previously been excluded from it. UCL's founding principles of academic excellence and research aimed at addressing real-world problems continue to inform our ethos to this day. UCL is consistently ranked amongst the top 10 universities in the world.

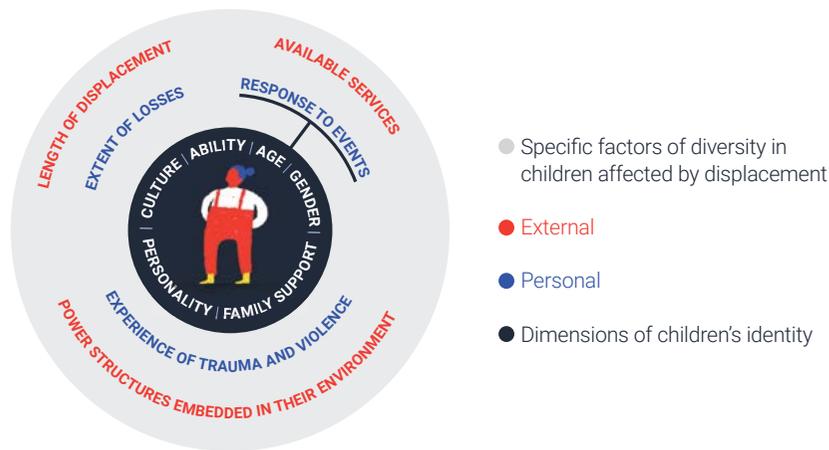
Introduction



Children make up around half of the refugee population worldwide, and 40% of the 80 million displaced people globally, with the majority settling in urban areas (UNHCR 2020). **Children's experiences of displacement are very diverse and influenced by a number of external contextual factors**, such as the length of displacement, availability and quality of services, and power structures embedded in their environments. A number of personal factors are also important, such as trauma and/or violence experienced by them or family members, and the extent of the losses experienced. Individuals' diverse responses to these situations are influenced by their gender, age, ability, personality, family structure, culture, and religion.

Therefore, responses must be tailored to the realities of children affected by displacement in a particular context.

Diagram 1 | Diversity of children affected by displacement and their experiences



Children affected by displacement are a very diverse group. Diagram 1 presents some dimensions of their identities and diversity factors. These dimensions interact in complex ways, requiring approaches that uniquely value the diversity of each child, and responses suitable for the group.

The quality of spaces available to children has an important impact on their development and wellbeing. As displaced families often settle in the poorest parts of cities and live in overcrowded, poor-quality housing alongside the most vulnerable residents, their children often suffer from poor access to quality public, learning and play spaces.

The handbook will discuss how co-designing built interventions with children affected by displacement can:

- **empower children** and have a lasting positive impact;
- **improve social cohesion, inclusion, social capital, and integration** between refugees and host communities, and within the refugee community;
- have a **positive impact on the local economy, build capacity and provide employment**; and
- deliver **better social infrastructures** (child responsive urban public spaces, schools, playgrounds) for children and their communities.

Despite their impact, there is an undersupply of built interventions that have been co-designed with children. This is because: they require professionals from different specialisms to work together, and often organisational structures do not make these collaborations easy; their additional value is difficult to recognise; and they require a larger initial investment compared to the built product alone. Furthermore, these interventions often present multiple operational challenges linked to safeguarding, cultural norms and appropriateness. This prevents many organisations from taking on such projects, despite the strong need for children's voices to be part of design responses in displacement contexts.

The DeCID handbook was born out of a lack of practical guidelines for co-designing built interventions with children affected by urban displacement. It was created by a mixed team of practitioners and academics from different disciplines, and via a research process involving interviews and thematic discussions with varied related practitioners.

While the team made efforts to make this handbook applicable to a wide variety of contexts, and to include examples from different regions, a significant proportion of the input was provided by people working in areas of Lebanon affected by mass displacement from Syria. As we believe in the importance of adapting interventions to their particular context, the reader should take this into consideration and assess what may, or may not, be relevant in their case.



1 Introduction

- Why a handbook?
- Who is this handbook for?
- How to use it?
- Key terms

2 Key concepts

3 Hands on

Diagram 2 | DeCID meaning



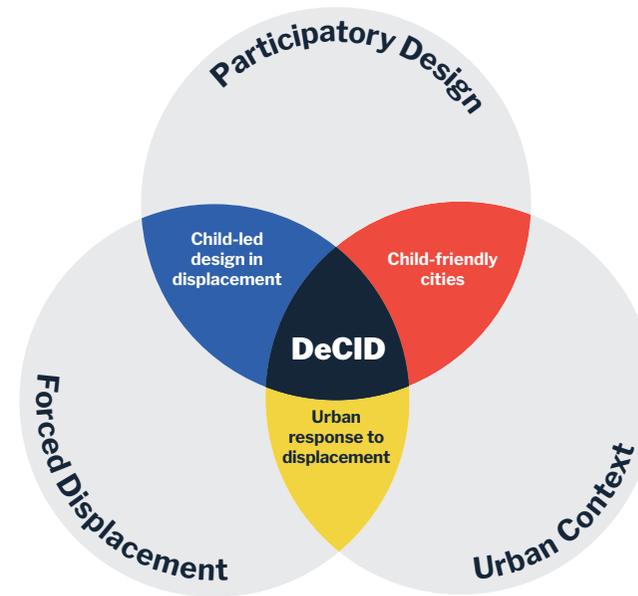
Why a handbook?

This handbook aims to raise the number and quality of built interventions that have been co-designed with children affected by displacement in the urban context: ultimately advancing their wellbeing. It provides practical insights regarding interventions that put children's wellbeing first, and at the intersection of participatory design, forced displacement, and the urban context.

However, an existing range of high-quality resources and guidelines that focus on single aspects, such as children's participation, forced displacement, participatory design and child-friendly cities, is acknowledged throughout. The reader is invited to switch to these when they offer more detailed information.

This handbook is the starting point for a longer conversation on the importance of engaging children affected by displacement in co-designing built interventions.

Diagram 3 | DeCID positioning



Who is this handbook for?

The handbook is aimed at everyone involved or interested in any aspect of co-designing built interventions with children affected by displacement. It has been written for NGOs and other humanitarian organisations, local governments, built environment professionals, those working with children, and members of all communities affected by displacement. The handbook presents all the phases of an intervention, and thus **includes sections that are not specific to working with children, but nevertheless fundamental** to their delivery, such as procurement and technical design.

The handbook often refers to the role of the facilitator. This does not mean to suggest that this is the same person throughout. Different phases of the intervention require different skills, and thus different professionals as facilitators.



1 Introduction

- Why a handbook?
- Who is this handbook for?
- How to use it?
- Key terms

2 Key concepts

3 Hands on

Practical insights regarding interventions that put children's wellbeing first

How to use it?

This handbook is not a step-by-step manual on how to plan and implement built projects, as every built intervention and its context is different. It rather provides principles, good practices and practical examples that can help practitioners to gather ideas and tips, and to adapt these as needed. It also aims at generating conversations about these interventions to enable actors to learn from each other's practice. Different parts of the handbook may be more relevant than others. Therefore, if the reader knows what they are looking for, they can safely skip to the related section.

The first part of the handbook discusses the key concepts underpinning built interventions that are co-designed with children affected by displacement. The second is more practical, divided into three macro **parts** of the intervention. Each macro part is divided into a number of steps linked to specific **examples** and **tools**. As built interventions are not linear processes and can be very diverse, **these steps can take place in any order**. There are strong connections between these steps, so the reader may need to move back and forth throughout the handbook. Children's participation cuts across all the steps presented.

The handbook aims to be accessible so that everyone involved can gain an understanding of the entire process, and how each phase can contribute to child wellbeing. For example, a child psychologist could read about procurement to gain an understanding of project activities with which they are not normally involved.

The main text is accompanied by:



Boxes: deal in greater depth with specific issues.



Examples: briefly present concrete projects that illustrate points made in the main text. Most examples have links to external websites for further detail.



Tools: can be used with children during specific steps of co-designing built interventions.



1 Introduction

- Why a handbook?
- Who is this handbook for?

• How to use it?

- Key terms

2 Key concepts

3 Hands on



Key terms

Children affected by displacement

Children affected by displacement refers both to displaced children and children of host communities who are also (albeit differently) affected by displacement. While categorising children and other residents as either displaced/refugees or hosts is sometimes necessary in this handbook, in practice the authors advocate for working with all potential users of built interventions. Their diversity is based on many dimensions, of which displacement is only one.

At times, the terms ‘displaced’ and ‘hosts’ are used to distinguish between those who were forced to move and other residents. However, the authors consider all residents of certain areas as directly or indirectly affected by displacement. We work to engage a diversity of people, to encourage social cohesion and acknowledge that different individuals may have different rights that can affect how they benefit from built interventions. The implications of these distinctions cannot be assumed through externally defined categories. They should be considered alongside other dimensions which affect the diversity of children, for example, gender, age, class, experience of violence, and others. This handbook adopts the Convention on the Rights of the Child ([🌐 article 1](#)) definition, that a **child** is any person under the age of 18. However, children are a very diverse group and their experiences of displacement can also be very different. In the introduction, some of the dimensions of diversity in children were introduced. These dimensions intersect to produce unique experiences, and thus practitioners need to devise participatory design processes that take this into account. This handbook does not explain how to work with all such dimensions. It rather focuses on giving an overview of the potential of the entire process of co-design of built interventions. It does, however, provide links to high-quality resources that contain detailed guidelines for working with different age groups, genders, abilities, etc.

Age requires particular focus, as multiple radical transformations take place in a person’s first 18 years. Biological and non-biological needs, sense of self, aspirations, and modes of expression all vary widely from adolescents and teenagers to younger children, for example. Classifications, social meaning and what is allowed at certain ages depend on many other intersecting contextual factors such as culture, gender, class, etc. The language of age classifications is often connected to specific educational and cultural

systems (e.g. baby, toddler, preschool, grade-schooler, teen). Moreover, labels like adolescent or youth may also include those older than 18 (e.g. UN statistical definitions of ‘adolescent’ includes those aged 10–19, ‘youth’ includes 15–24-year-olds).

This means that, while this handbook and linked resources indicate an appropriate age for some of the tools presented, the involvement of local educators and caregivers is fundamental for planning activities involving children. Therefore, while some age classifications for children are more widely accepted, in this handbook we prefer not to adopt any one specifically, and instead highlight the importance of age in interventions with children.

Finally, girls deserve particular attention because, in many marginalised urban contexts, females’ access to public space is further limited by social norms, the perception or reality of safety concerns, and other factors. Later, we explain the specific complexities facing adolescent girls. A strong gender lens is fundamental when planning co-designed built interventions and can improve the wellbeing of both girls and boys.

Co-design and Participatory Design

This handbook acknowledges the different origins of the terms Participatory Design (PD) and Co-design; as well as the academic debates that often view participatory design as involving a deeper and higher form of participation than co-design. Here, we use these terms interchangeably. In this handbook, **Participatory Design** and **Co-design** refer to a family of practices where future users and other stakeholders are fully involved in the design process.

A useful working definition is provided by Simonsen and Robertson (2013, p. 2): “a process of investigating, understanding, reflecting upon, establishing, developing, and supporting mutual learning between multiple participants in collective ‘reflection-in-action’. The participants typically undertake the two principal roles of users and designers where the designers strive to learn the realities of the users’ situation while the users strive to articulate their desired aims and learn appropriate technological means to obtain them.” Co-design can be understood and implemented as a tool to build local



1 Introduction

- Why a handbook?
- Who is this handbook for?
- How to use it?

• Key terms

2 Key concepts

3 Hands on

Family of practices where future users and other stakeholders are fully involved in the design process

human capacity. It contributes to the sustainability of the end product, as this will not be dependent on external inputs once the participatory process has been successfully completed. The level of participation depends on the characteristics of the project. It could be a community-led design involving minimal external input, with the community self-managing each phase; or it could involve more structured participation within a project that has a preestablished scope and a deeper reliance on external professionals.

In this handbook, 'Design' refers to the entire process of creating a built intervention, starting with an idea and ending with the built intervention. This includes the implementation of a built intervention, as design choices can also be made during construction. This understanding differs from other approaches that limit design to the drawing of an intervention. We illustrate the different steps involved within this broader understanding of the design process.

Co-designed built interventions

This handbook uses the term **intervention** rather than 'project', as the latter is considered too narrow and formal in this context. Intervention also refers to less structured or longer term co-design processes that are not necessarily formulated as projects.

Built interventions are referred to because the main focus is on spatial interventions with a built component, even if this may be small. Examples include child-friendly spaces, schools, playgrounds, and other urban public space interventions to make cities more child-friendly. However, many components of this handbook may also inform interventions without a built aspect.

A key assumption underpinning this text is that children should be able to play everywhere. The handbook argues for the importance of having cities where children feel safe and welcomed. It asserts that even small interventions can help change attitudes and develop stakeholders' awareness of the importance of cities becoming more child friendly. Sometimes, interventions involve existing spaces to make them work better for children, and can be as simple as removing obstacles to play.

Beyond the site of the intervention, it is important to think about the paths children take to move between places. Are these safe for both girls and boys? Do they promote autonomy (e.g. can children safely walk to school)?



EXCELLENT RESOURCES

In recent years, there has been growing interest amongst policy makers, planners, and professionals in children's participation, recognising young people as important agents in shaping development interventions. Many high-quality resources have been produced around this topic; children and urban planning; and children affected by crises including displacement. The table below presents a selection of these, a more comprehensive collection can be found at

decid.co.uk/resources.

Children's participation

-  Eurochild and the Learning for Well-being Foundation. 2020. We are here. A child participation toolbox.
-  Save the Children. 2003. So you want to consult with Children? A toolkit of good practice.
-  Child Fund International. 2010. Child- and youth-friendly participatory action research toolkit.
- Bernard van Leer Foundation. 2014. Steps to engaging young children in research.  Vol. 1: The guide &  Vol. 2: The researcher toolkit.
-  UNICEF and EU. 2015. Child rights toolkit. Module 3: Child participation.
-  Child Workers in Asia Foundation (CWA). 2006. Working together: a guidebook for training of trainers on mainstreaming children's participation.
-  ChildHope. 2013. Children and young people's participation (CYPP) training workshop guide.
-  TDH Germany. n.d. Practical toolkit on children's participation.
-  Save The Children. 2004. So you want to involve children in research? A toolkit supporting children's meaningful and ethical participation in research relating to violence against children.
-  UNICEF Canada's One Youth. n.d. Youth-centred design toolkit.



1 Introduction

- Why a handbook?
- Who is this handbook for?
- How to use it?

• Key terms

- 2 Key concepts
- 3 Hands on

Children and urban planning

-  UNICEF. 2018. Shaping urbanization for children: A handbook on child-responsive urban planning.
-  UNICEF. 2008. A practical guide for developing Child Friendly Spaces.
-  Danenberg, R, Doumpa, V, and Karsseberg, H (eds.) 2018. The City at Eye Level for Kids.
-  UN-Habitat. 2015. Using Minecraft for youth participation in urban design and governance.
-  ARUP. 2017. Cities alive: Designing for urban childhoods.
-  Participate in Design. 2020. Hack our play.
-  UN-Habitat. 2012. Visioning as participatory planning tool: Learning from Kosovo practices.

Children facing crisis, emergencies and forced displacement

-  Save the Children. 2006. Making space for children. Planning for post-disaster reconstruction with children and their families.
-  International Play Association. 2017. Access to play for children in situations of crisis. Play: Rights and practice - A toolkit for staff, managers and policy makers.
-  Inter-Agency Standing Committee. 2019. Community-based approaches to MHPSS programmes: A guidance note.
-  Save the Children. 2019. Durable solutions for children toolkit.
-  IOM. 2019. Manual on community-based mental health and psychosocial support in emergencies and displacement.
-  Terre des Hommes. 2018. Sport for protection toolkit: Programming with young people in forced displacement settings.



Global policy frameworks

Built interventions, co-designed with children affected by displacement, contribute to complying with the following global policy documents. While their contribution is broader, they specifically address the following aspects:

UN Convention on the Rights of the Child

Article 2: non-discrimination

'The Convention applies to every child without discrimination, whatever their ethnicity, sex, religion, language, abilities or any other status, whatever they think or say, whatever their family background.'

Article 3: best interest of the child

'The best interests of the child must be a top priority in all decisions and actions that affect children.'

Article 6: life, survival and development

'Every child has the right to life. Governments must do all they can to ensure that children survive and develop to their full potential.'

Article 12: respect for the views of the child

'States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child.'

Article 13: freedom of expression

'The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice.'

Article 15: freedom of association

'Every child has the right to meet with other children and to join groups and organisations, as long as this does not stop other people from enjoying their rights.'



1 Introduction

- Why a handbook?
- Who is this handbook for?
- How to use it?

• Key terms

2 Key concepts

3 Hands on

Article 24: health and health services

'Every child has the right to the best possible health. Governments must provide good quality health care, clean water, nutritious food, and a clean environment and education on health and well-being so that children can stay healthy. Richer countries must help poorer countries achieve this.'

Article 27: adequate standard of living

'Every child has the right to a standard of living that is good enough to meet their physical and social needs and support their development. Governments must help families who cannot afford to provide this.'

Article 28: right to education

'Every child has the right to an education. Primary education must be free and different forms of secondary education must be available to every child. Discipline in schools must respect children's dignity and their rights. Richer countries must help poorer countries achieve this.'

Article 31: leisure, play and culture

'Every child has the right to relax, play and take part in a wide range of cultural and artistic activities.'

Article 32: child labour

'Governments must protect children from economic exploitation and work that is dangerous or might harm their health, development or education. Governments must set a minimum age for children to work and ensure that work conditions are safe and appropriate.'

Article 39: recovery from trauma and reintegration

'Children who have experienced neglect, abuse, exploitation, torture or who are victims of war must receive special support to help them recover their health, dignity, self-respect and social life.'

UN-Habitat New Urban Agenda

- 'We envisage cities and human settlements that ... foster social cohesion, inclusion and safety in peaceful and pluralistic societies, where the needs of all inhabitants are met, recognizing the specific needs of those in vulnerable situations' (2016, p. 5)

- Para 34:** ... ensure ... access to sustainable basic physical and social infrastructure for all, without discrimination, ... commit to ensure that these services are responsive to the rights and needs of ... children and youth ... and others that are in vulnerable situations.
- Para 67:** ... to promote the creation and maintenance of well-connected and well-distributed networks of open, multipurpose, safe, inclusive, accessible, green, and quality public spaces to improve the resilience of cities.

UN Sustainable Development Goals (SDGs)

- SDG 8:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- SDG target 16.7:** Ensure responsive, inclusive, participatory and representative decision-making at all levels.
- SDG 4.a:** Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.
- SDG 11.7:** By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.

UNHCR. Refugee Children: Guidelines on Protection and Care

Refugee participation - or permitting refugees to take back control of their own lives - is fundamental to developing, or re-building, a healthy community. Through participation, refugees can regain influence and control over their lives which, in turn, will have a positive impact on the raising of self-esteem. Consulting refugees on matters such as house construction and layout, food preferences, or requirements to regenerate religious activities, can make a critical difference in the restoration of cultural normalcy.



1 Introduction

- Why a handbook?
- Who is this handbook for?
- How to use it?

• Key terms

2 Key concepts

3 Hands on

Key concepts



This section introduces the key concepts underpinning this handbook. It discusses how co-design with children can be used with children in urban settings affected by displacement to create child responsive built interventions that enhance children's wellbeing.

After introducing child wellbeing, this section discusses:

- children in urban settings affected by displacement;
- the importance of space and play; and
- the importance of child responsive interventions, given the strong link between child wellbeing and the built environment.

The final part examines the impact of co-design with children on child responsive built interventions, as well as outlining the challenges and risks involved, particularly in working with children affected by displacement.



- ☰
- 1 Introduction
- 2 **Key concepts**
 - I. Child wellbeing
 - II. Children in urban settings affected by displacement
 - III. Child responsive built interventions
 - IV. Co-design with children
- 3 Hands on

I - Child wellbeing

Defining wellbeing is especially challenging because of the different ways in which the concept is understood in different contexts and by different people. Rather than being driven by a definition, organisations have focused on dimensions and descriptions (Dodge, Daly, Huyton, & Sanders, 2012). What various authors agree on is the multidimensional character of wellbeing and the fact that different dimensions are deeply intertwined.

A number of frameworks have been developed and used by governments and organisations such as the European Commission, Save the Children and UNICEF. While the ways of organising and measuring different dimensions and indicators differ, all such frameworks seem to include versions of the following: a material dimension, a link to standards of living; a subjective dimension, how people feel; and a relational dimension which emphasises the importance of people's relationships with others (White, 2010). In OECD countries, UNICEF adopts a framework with six dimensions: material wellbeing; health and safety; educational wellbeing; family and peer relationships; behaviour and risks; and subjective wellbeing. The European Union lists housing and environmental conditions rather than family and peer relationships.

Debates on the measurement and conceptualisation of children's wellbeing are beyond the scope of this handbook and are well developed elsewhere. What is important in this context is that children's wellbeing remains the normative goal of co-designed built interventions with children, and that it is a multidimensional concept addressing the rights presented in the Convention on the Rights of the Child. For a recent analysis of the different child wellbeing frameworks, please refer to Cho & Yu (2020) which we briefly review in box 2.



APPROACH AND DIMENSIONS OF CHILD WELLBEING

Esther Yin-Nei Cho and Fuk-Yuen Yu (2020) analysed the frameworks adopted by 186 studies which attempted to measure child wellbeing. Most frameworks adopt a subjective dimension of wellbeing (n=95). Another relevant proportion of the studies considers both subjective and objective wellbeing (n=59), and only a minority (n=32) focused only on objective dimensions. Subjective aspects of wellbeing include affective and cognitive elements relating to the balance of positive and negative emotions and life satisfaction. They can also include the ability to pursue meaningful goals and self-actualisation.

Given the importance of subjective dimensions in the studies reviewed, we present a summary of the most frequent dimensions of subjective child wellbeing. It is also interesting to note how subjective dimensions have been adopted more widely in the last decade, indicating a significant change in the understanding of child wellbeing.

Dimensions Frequency

Social relationships (family, peer, general) and community connectedness	193
Health, physical functioning, and physical wellbeing	94
Psychological wellbeing and personal resources	90
School experience	88
Emotional functioning and wellbeing	43
Economic wellbeing	38
Leisure and time use	37
Neighbourhood wellbeing	27
Overall life satisfaction	27
Sense of safety	23
Learning and cognitive functioning	20
Children's rights and autonomy	16
Spirituality and others	5

Source: Cho & Yu 2020, p. 7



1 Introduction

2 Key concepts

I. Child wellbeing

II. Children in urban settings affected by displacement

III. Child responsive built interventions

IV. Co-design with children

3 Hands on

II - Children in urban settings affected by displacement

Nearly 80 million people were displaced globally by the end of 2019. Their number has doubled in less than a decade and is at a record high. 85 per cent of displaced people are hosted in developing countries. Of these, 26 million are refugees and 77 per cent have been in protracted situations lasting more than five years (UNHCR, 2019). The average length of such protracted situations is increasing. From 1978-2014, over 80% of all crises lasted more than ten years, and 40% lasted 20 or more years (ODI, 2015).

Displaced people are increasingly living in urban areas. The proportion of the refugee population based in urban settings was estimated at 61 per cent in 2018 (UNHCR, 2019a) and two thirds of internally displaced people resided in cities in 2019 (UNHCR, 2020). In urban areas, displaced people often end up living in peripheral informal settlements with the urban poor, who are also socially and economically marginalised. Developing countries that host displaced populations often face challenges in providing the basics for their own citizens, which can increase social tensions when refugees arrive. Forty per cent of the world's displaced people are children. In the Syrian refugee crisis, nearly 45 per cent of registered Syrian refugees in Lebanon, Jordan, Iraq and Egypt were under the age of 14 (UNHCR, 2017).

When children and their families leave their homes behind, they do so in search of safety. However, displacement exposes children and their families to a wide range of additional distress and dangerous events. The consequences of displacement on children's health, education, and security can be severe. The housing conditions in which the displaced settle, commonly characterised by minimum hygienic practices and unsanitary conditions, are harmful to children's health as they increase the risk of infectious diseases. The loss of income that often accompanies displacement can force families to send their children to work rather than school. Poverty is a major burden for children and their families, leading to high levels of stress, and forcing children into child labour and early marriage.

Diagram 4 | Displacement key data

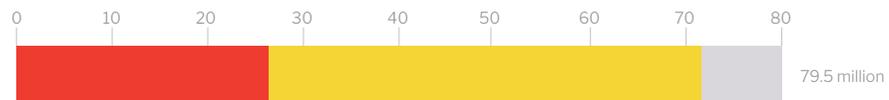
Source UNHCR 2020 Global trends: Forced displacement in 2019

NEARLY
80
MILLION PEOPLE
DISPLACED
GLOBALLY



40 %
are children

85 %
are hosted in
developing countries



26 MILLION
are refugees

61 %
live in urban settings

77 %
live in protracted situation

45,7 MILLION
are internally displaced

66 %
live in urban settings

4 IN 5
DISPLACEMENT CRISIS
lasted more than 10 years

2 IN 5
DISPLACEMENT CRISIS
lasted more than 20 years



1 Introduction

2 **Key concepts**

I. Child wellbeing

II. Children in urban settings affected by displacement

III. Child responsive built interventions

IV. Co-design with children

3 Hands on

Displaced people often end up living in peripheral informal settlements with the urban poor

Common challenges faced by displaced children:

- Food insecurity
- Exposure to violence
- Lack of safety
- Poverty
- School dropout
- Child labour
- Exposure to hazards
- Mental health issues
- Separation from family and friends
- Discrimination
- Barriers to access healthcare
- Lack of play opportunities
- Poor housing conditions
- Overcrowded and inadequate infrastructure and services

Displaced children may also experience the breakup of their families and communities, and are burdened with challenges, including changes in family dynamics. Children can take on the role of providers for the family, or become caregivers for their younger siblings or parents who have been physically or psychologically affected by their experiences. Children may experience highly distressing events before, during and after forced displacement, and these may have long-lasting effects. Such events may result in physical disability and deterioration of physical health, cultural and social losses, and psychological suffering such as post-traumatic stress disorder, depression and anxiety.

Children's individual responses to traumatic events differ based on factors including gender, age, personality, cultural background, personal and family history. The nature of the traumatic events they are exposed to, and the frequency and length of their exposure, are also significant factors. Children's exposure to violence, the degree of their exposure to threat, the accumulation of adverse experiences, and the duration of their exposure all increase the possibility of children acquiring mental health problems.

Forcibly displaced children are often exposed to additional risks, including living with caregivers who are also experiencing trauma or stress, having

irregular status in the host country, being discriminated against, living in poverty, separation from their family and community, and multiple traumas. The proximity of supportive caregivers (which include parents) to children during terrifying events can significantly mitigate the effects of these experiences on children. This is also why engaging parents and caregivers in co-design processes is recommended and can provide lasting benefits for displaced children's wellbeing (El-Khani, Ulph, Peters & Calam, 2016).

Children from both host and refugee communities may experience issues with safety in their environments. The influx of refugees into their areas may limit the ability of children from host communities to play in playgrounds or courtyards, as these spaces may become overcrowded or turned into spaces for refugees to live in. Both refugee and host community children may face barriers to school attendance. Increases in traffic and costs of transportation, and decreases in income, may affect school attendance of host community children. Moreover, food consumption, access to healthcare and health problems, access to play spaces and time to play may be negatively affected for both refugee and host communities. Since most refugees resettle in low and middle-income countries, poverty is usually a factor affecting not only refugees but also host communities.

Some of the most widely reported factors that may protect displaced children and help them overcome highly distressing experiences include good quality schools, childcare facilities, and safe spaces for play and learning. Restoring routine, play, and order in displaced children's lives, as well as support from families and communities, may help children recover from difficult experiences. One of the main ways of reintroducing routine into children's lives is to resume their schooling. However, in Lebanon, over half of Syrian children were not attending school in 2018 (UNHCR, UNICEF, and WFP 2018).

Children are agents and rights holders, powerful co-creators of knowledge, and experts on their own lives. Children's participation provides researchers and practitioners with a unique understanding of children's life experiences. This is even true for the youngest children, whose voices can be heard when appropriate methods are used.

A more detailed discussion on children affected by displacement and how to work with them can be found in the DeCID Thematic Briefs:

 [Working With Children Affected by Displacement](#) and [Children and Urban Displacement](#).



1 Introduction

2 **Key concepts**

I. Child wellbeing

II. Children in urban settings affected by displacement

III. Child responsive built interventions

IV. Co-design with children

3 Hands on



ADOLESCENT GIRLS

There are two key periods of child identity development that require different approaches: childhood and adolescence. The intersection of gender and age deserves attention as adolescent girls affected by displacement in urban areas face enormous challenges from menarche. In development interventions, children are often homogenised into one category, ignoring their vast differences and often proposing approaches that either infantilise adolescent girls or fail to distinguish them from adult women. This box highlights the specific challenges and needs of this group of children that are often not explicitly targeted. It builds on a slowly increasing body of work by NGOs and research from the

 **[Gender and Adolescence: Global Evidence study](#)**.

In displacement settings, risks to young girls from violence and early sexual activities are exacerbated by the social and physical challenges of managing menstruation in overcrowded situations with limited privacy, water, sanitation and hygiene services. Modesty and secrecy may be prioritised by caregivers over girls' basic physiological needs (Chant, Klett-Davies, & Ramalho, 2017). Moreover, a growing proportion of adolescents are displaced without a parent.

Adolescent girls 'experience multiple layers of discrimination on the basis of socially constructed gender roles, but also on the grounds of age, which compounds their marginalisation. Typically, they are relegated to the bottom of power structures within the family, the community and society' (Aling'o and Abdulmelik, 2017, p. 2). These inequalities result in adolescent girls being disproportionately affected by the structural exclusions and spatial limitations that characterise many urban poor neighbourhoods, with important implications for their health, wellbeing and personal advancement (Ramalho and Chant, forthcoming). Girls' ability to adequately care for their personal hygiene during menstruation is negatively affected by taboos around frank and open discussions about female reproductive health.

Adolescence is a key stage of individual cognitive, emotional and social development, and physical transformation. For girls, the first menstruation marks a set of significant biological and socio-cultural changes – the entry into woman-hood and child-bearing capacity. This is often associated with expectations of different behaviour and taking on additional responsibilities in the household, resulting in less time for education and leisure activities (Mmari et al., 2016 cited in Coast and Lattof, 2018).

Gender moral codes may lead to the increased surveillance of adolescent girls to reduce their interaction with men, which limits their movement and shrinks their use of public spaces. While mobility expands for adolescent boys, girls' spaces are reduced. Moreover, girls often perceive public space as unsafe and may risk having their reputation damaged by being out in it. Safety concerns constrain the freedom, geographic mobility and opportunities of adolescent girls, with long-term psychosocial and material implications for their wellbeing (Hallman et al., 2015).

Social norms and limited access to clean water and private spaces for bathing create exceptionally difficult circumstances for females of reproductive age to manage their menstrual hygiene. The situation is more difficult for girls with disabilities or who face discrimination in accessing water and sanitation because of their ethnicity or nationality (Ramalho and Chant, 2021; Coast et al., 2017; Sommer et al., 2015). The absence of girl-friendly water and sanitation facilities in schools causes many girls to miss school.

Schools are spaces where girls may experience sexual and gender-based violence from peers and teachers, which also contributes to dropouts. Adolescent girls living in cities report exposure to harassment on their journeys to school or at communal water and sanitation facilities. Living in constant fear of crime and violence has acute mental health implications. Displaced urban adolescent girls face specific challenges worsened by the socio-economic, spatial and infrastructural constraints associated with the poor urban neighbourhoods or precarious settlements where they settle.

This box heavily draws upon Chant, S., Klett-Davies, M., & Ramalho, J. (2017). Challenges and potential solutions for adolescent girls in urban settings: a rapid evidence review. London.

For a more detailed review,  **[see this document](#)**.



1 Introduction

2 **Key concepts**

I. Child wellbeing

II. Children in urban settings affected by displacement

III. Child responsive built interventions

IV. Co-design with children

3 Hands on



CHILDREN WITH DISABILITIES

The 'World Report on Disability' describes disability as "complex, dynamic, multidimensional and contested" (WHO & World Bank, 2011, p. 3) suggesting that there is no unique definition of people/children with disabilities. The Convention on the Rights of Persons with Disabilities (UNCRPD) ( [Art.1](#)) states:

"Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others".

Data on persons with disabilities are very limited, and vary widely depending on the different dimensions of impairment. The World Health Organisation (WHO) estimates that 15.3% of the world's population, including 93 million children under the age of 14, have moderate or severe disabilities (WHO & World Bank, 2011).

Over 10 million displaced persons suffer from a form of disability (UNHCR, 2019). Considering that out of the estimated displaced population, half are children (UNICEF, 2016), it is reasonable to argue that displaced children with disabilities constitute a sizeable group of individuals.

Displacement settings are more likely to heighten risk factors and are therefore more 'disabling'. As the Convention on the Rights of Persons with Disabilities (UNCRPD) highlights, it is in fact the inability to accommodate and assist that turns impairment into disability (UNESCO, 2019). Despite being among the most marginalized, children and youths with disabilities living in communities affected by crisis or conflict are often excluded from humanitarian support (UNICEF, 2017).

Humanitarian actors generally fail to address the needs of children with disabilities because:

- Recruitment of children and adolescents is often done through schools, temporary learning spaces and child-friendly spaces, from which those with disabilities may be excluded;
- Children with disabilities may be isolated and hidden within their communities due to stigma, preventing the child's access to humanitarian assistance;
- Lack of knowledge and assumptions that children with disabilities require specific programming may reduce opportunities for inclusion.

Although research on disability within crisis-affected communities is limited, examples of good practice demonstrate that it is possible to design appropriate strategies to improve inclusion if high-quality data are collected. This also applies to designing inclusive built interventions.

Inclusion encompasses the establishment of a series of measures to ensure the removal of barriers which prevent persons with disabilities from accessing services and participating in society.  **UNHCR's report:** 'Working with persons with disabilities in forced displacement' is clear on this:

"barriers can be related to policy and law, the physical environment, communication, and social and cultural beliefs. Barriers can manifest in legal frameworks and norms; institutional policies, standard operating procedures and budgets; and in attitudes and behaviour. [...] it is the service providers' responsibility to design services to be usable by all people, to the greatest extent possible, and, where persons with disabilities are not accessing or participating in activities addressed to the whole population, make changes to programming to create the same opportunity for persons with disabilities to participate in and benefit from these activities" (UNHCR, 2019, p. 9).



1 Introduction

2 **Key concepts**

I. Child wellbeing

II. Children in urban settings affected by displacement

III. Child responsive built interventions

IV. Co-design with children

3 Hands on

VULNERABILITIES OF DISPLACED CHILDREN

The following is a list of vulnerabilities to be considered when working with displaced children and their families, from [Save the Children's Durable Solutions for Children Toolkit 2019](#) (pp. 63-64).

- **Language and communication barriers:** Displaced persons or migrants may not speak the same language as the community they are in.
- **Legal barriers:** Displaced persons or migrants often do not have the same legal rights and privileges as the host population.
- **Cultural differences:** Displaced persons or migrants may come from a different culture and have different traditions to the host population.
- **Lack of awareness:** Displaced persons or migrants may not have full knowledge about the offered services, locations, norms, etc.
- **Racism and discrimination against displaced persons or migrants:** Host communities and authorities may discriminate against displaced persons or migrants in the provision of services, aid, opportunities, etc.
- **Lack of social cohesion:** Communities may not be welcoming of displaced persons or migrants, making it difficult for them to have a sense of belonging and to socially integrate into society.
- **Restriction of movement:** Authorities may restrict the movement of displaced persons or migrants (e.g. not allowing them to leave camps, to go beyond the city limits, etc.), affecting their access to goods and services.
- **Restrictive political environment:** Local and global political conditions may not allow the full restoration of the rights of displaced persons or migrants.
- **Parallel systems:** Often parallel systems are built up in ministries or among public service providers to cater for refugees/displaced communities, or are even organised by displaced communities themselves. Whereas this may be an appropriate idea in a crisis situation, it will often not be economically sustainable in the longer term or will become counterproductive to integration.
- **Lack of participation and representation:** Many situations exist where displaced or migrant populations (especially women, youths and children) do not have access to relevant decision-making forums, because representative structures do not exist, or are not given access to relevant duty bearers.



1 Introduction

2 **Key concepts**

I. Child wellbeing

II. **Children in urban settings affected by displacement**

III. Child responsive built interventions

IV. Co-design with children

3 Hands on



PLACE AND PLAY

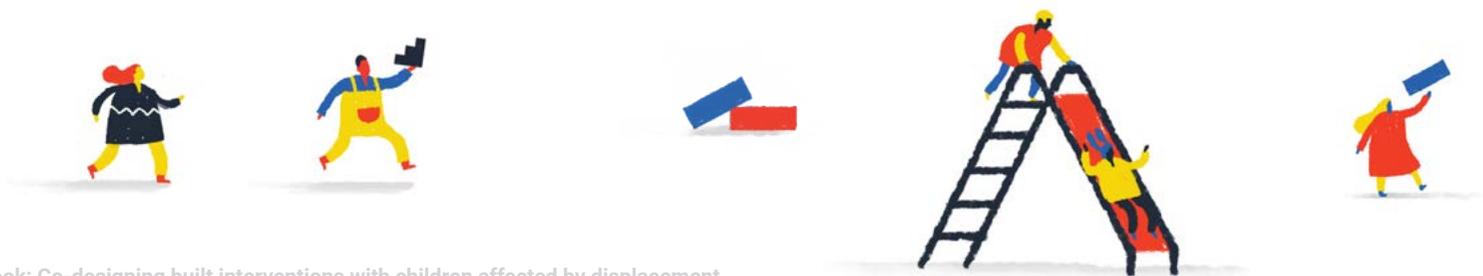
From a child's perspective, play is free, self-controlled and self-initiated, voluntary, natural and unlimited, spontaneous, active, and fun (Wiltz and Fein, 2006). Play involves pretending, making up and following rules, learning to negotiate and compromise, and using objects symbolically, allowing children to take risks in a safe space. **It tends to focus on the process, not the end product.** It also allows children to control an experience which is important, especially in a context where they can't control much else.

Play is important for children's learning and academic outcomes, and for their holistic development. It can have a positive impact on children's emotional wellbeing as it may reduce depression, anxiety, aggression, and sleeping problems (Burdette and Whitaker, 2005). Play may enhance children's adaptive systems, affecting their wellbeing, resilience and health (Lester and Russell, 2010), and this can be especially important for children who have experienced forced displacement.

Children enjoy playing in environments where they can experience novelty, excitement and fun, but where they also feel a sense of security and stability (Henricks, 2006). Rasmussen (2004) distinguishes between 'places for children' and '**children's places**'. Places for children are those that have been designed, built and organised by adults for children, whereas children's places are places that children attribute special meaning to, places that they themselves choose, use, define and create.

Children's places may or may not be identical to places created by adults for children. **While adults may build places for children such as playgrounds, these places may not meet children's needs.** Children should therefore be actively involved in designing and planning spaces that are meant for children. Importantly, children's places encourage and support space for imagination and growth. A developing child will discover a growing identity over time, but the space provides an anchor for memory and serves as an identifiable location for play (and sometimes comfort), which is very important for children in displaced contexts.

Interventions aimed at promoting play should ensure enough unpredictability and flexibility, but also security in the environment so that children can play freely. However, **adults should be careful not to destroy 'children's places' by pursuing their own agendas, by planning without children's input, or by creating play spaces and programmes that control children's play and segregate them.** When children's spaces are not sufficiently understood and respected, they can be inadvertently and easily destroyed. In vulnerable contexts, most play friendly children's places are informal, not originally designed for play. Often the best intervention is to recognise the importance of such spaces and to protect them. Finally, it is important to highlight that children should be allowed to play safely in all kinds of urban spaces, and that play should not be confined to specially designed areas.



1 Introduction

2 **Key concepts**

I. Child wellbeing

II. **Children in urban settings affected by displacement**

III. Child responsive built interventions

IV. Co-design with children

3 Hands on

III - Child responsive built interventions

By outlining the link between child wellbeing and the built environment, this section makes a case for child responsive built interventions. Research has shown a correlation between the built environment and children's wellbeing: the 'neighbourhood built environment may be important for reducing mental health difficulties and increasing mental health competence in young children' (Alderton et al., 2019). Neighbourhood design can foster a sense of safety, positive identity and belonging, reduce tensions and provide protection from traumatic symptoms in children (Akkesson and Denov, 2017, p. 140).

Save the Children indicates that spaces that encourage children to play, express themselves, and socialise may be key in reducing stress, improving resilience and positive development (Bartlett and Iltus, 2006). Access to nature and public open spaces are important for mental health competence and its association with lower mental health difficulties (Alderton et al., 2019).

The built environment contributes to children's ability to learn (Bartlett and Iltus, 2006). For a young child's brain to develop well, it must be stimulated by 'colours, textures, shapes, by the chance to watch, touch, imitate, experiment, and explore... A safe, stimulating environment is fundamental in ensuring that children have the play opportunities that they need, so that every day is a chance to learn' (ibid., p. 6).

Furthermore, there appears to be a relationship between the built environment and children's sense of self-worth (Chawla, 2001). For instance, children see deprived elements of the built environment as a humiliating reflection of their own value as people (ibid.). There is solid evidence of the benefits of physical activity and play for children's cognitive and psychosocial development and wellbeing. Data from the fields of neuropsychology and psycho-pharmacology reveal that clear changes in the brain happen as a result of play, and that both social behaviour and the capacity for learning are affected (Hughes, 1999).

The link between poor living environments and poor child development is particularly evident in contexts of crisis, where children often live in long-

term encampments that lack educational and play facilities. Informal settlements are characterised by the poor structural quality of housing and lack of basic services. Poor households often construct their homes from recycled building materials, which are often flimsy (Amorós, 2017), and such dwellings can lack natural light, ventilation, thermal properties, privacy and have inadequate indoor and outdoor spaces.

Some studies suggest that the sensitivity of young children to poor living environments can cause irreversible physical and mental damage (Gordon et al., 2003). Therefore, in contexts where children are deprived of opportunities for social learning, a supportive and safe built environment can make a substantial difference to children's quality of life. Moreover, where the presence of children in the public realm is encouraged, the perception of safety tends to increase, attracting people and enhancing opportunities for social interaction (Bartlett, 1999).

However, built environment practitioners frequently fail to consider the possible impact that the spaces they design and build have on child wellbeing. There is often an implicit (and wrong) assumption that 'improved conditions for a community at large will affect children in the same way that they affect everyone else' (Bartlett, 1999).

Acknowledging the important role of the built environment in child wellbeing has led several actors to develop child responsive built interventions. Within this set of interventions, this handbook proposes co-design with children as a useful approach and next section will introduce some of its benefits. The two concepts below, developed by UNICEF, further promote the idea of improving child wellbeing through better planned and designed physical environments for children in urban settings and in emergency contexts. These are child friendly cities and child friendly spaces.

The **UNICEF Child Friendly Cities Initiative** (CFCI) promotes that children and adolescents, including the most excluded, benefit from the development and implementation of inclusive, non-discriminatory, child-responsive policies at the local level. Through meaningful, inclusive and regular child participation in local decision-making processes in urban settings, children



1 Introduction

2 **Key concepts**

- I. Child wellbeing
- II. Children in urban settings affected by displacement

III. **Child responsive built interventions**

- IV. Co-design with children

3 Hands on

There is often an implicit (and wrong) assumption that 'improved conditions for a community at large will affect children in the same way that they affect everyone else' (Bartlett, 1999)

and adolescents will have access to quality, essential social services, will live in a safe, secure and clean environment, and will have opportunities to enjoy family life, play and leisure.

Inspirational examples are available on the platform of [UNICEF's Child Friendly Cities Initiative](#).

Child Friendly Spaces (CFSs) are a type of social infrastructure for children used by humanitarian agencies to increase children's access to safe environments and promote their psychosocial wellbeing. CFSs try to provide a safe place where children can come together to play, relax, express themselves, feel supported and learn skills to deal with the challenges they face (Save the Children, 2018). In emergency situations, such as conflicts and natural disasters, CFSs have become a widespread response to the challenges that children face.

CFSs have a positive impact on children affected by displacement, but they are not always set up through participatory processes that engage with children. Thus, they miss out on the wellbeing benefits of engaging children in co-design processes.

A more detailed discussion on child wellbeing and the built environment can be found in the DeCID Thematic Brief:

[Child Development and Participation in Urban Displacement](#).



- ☰
- 1 Introduction
- 2 Key concepts**
 - I. Child wellbeing
 - II. Children in urban settings affected by displacement
 - III. Child responsive built interventions**
 - IV. Co-design with children
- 3 Hands on

IV - Co-design with children

By outlining the link between child wellbeing and the built environment, this section makes a case for child responsive built interventions. Research has shown a correlation between the built environment and children's wellbeing: The 'Neighbourhood built environment may be important for reducing mental health difficulties and increasing mental health competence in young children' (Alderton et al., 2019). Neighbourhood design can foster a sense of safety, positive identity and belonging, reduce tensions and provide protection from traumatic symptoms in children (Akkesson and Denov, 2017, p. 140).

Children's participation in co-design processes is as valuable as the quality of the final designs. Co-design is an approach to built interventions that has the potential to create local human capacity and to contribute to the sustainability of the end product. The sustainability will not be dependent on external inputs once the participatory process has been successfully completed (Hussain et al., 2012). Decision makers who engage in children's participation will be able to make better informed choices, leading to better outcomes.

Co-designing with children means also engaging their caregivers, siblings, educators and other important members of the children's networks.

 [The International Bureau for Children's Rights](#) (2018) outlines six principles for children's participation, which can be applied to co-design processes and underpin this handbook:

1. Participation is relevant and meaningful to children.
2. Participation is voluntary and informed.
3. Participation will do no harm to the child.
4. Participation is inclusive of and accessible to all children.
5. Participation processes are managed by trained, competent personnel.
6. Participation processes are implemented and assessed rigorously and professionally.

IV.I - Impact of co-design with children

Engaging children in participatory design activities can have a significant impact on their development, capacities, and wellbeing. Children's engagement in participatory processes can enhance social and cognitive skills, while increasing their sense of connection to other people and to nature (Sutton and Kemp, 2002). Children's participation is valued as an effective approach for improving children's self-esteem, empowering them, teaching new skills, and developing them into more active and responsible citizens (Sabo, 2001).

Given the significant diversity in children's needs and capacities at different ages, tailoring methods and approaches is fundamental. Through the use of age-appropriate methods, children may acquire knowledge, develop skills, build friendships and wider support networks, be heard, gain a sense of control and be taken seriously. For example, Syrian refugee children interviewed after they participated in the co-design of a playground in Lebanon with CatalyticAction said that they felt equipped with the knowledge to build their own playground once they returned to Syria.

Participatory design can also help children overcome mental, physical, and social issues that they might be experiencing, including social exclusion. When children are involved in participatory processes, they can work within developmentally appropriate structures that promote a sense of group membership and accountability, and hence experience empowerment and diminished alienation. Children who are alienated from the rewards of mainstream society get a chance – through participatory processes – to be part of a new situation that allows them to earn the approval of their caregivers, neighbours, friends and oneself (Sutton and Kemp, 2002). The co-design tools presented in this handbook not only encourage play and empowerment, but also promote collaboration, playing and learning together, and are important for the socialisation of children.

Engaging children affected by displacement in conversations around the production of their environments can be empowering, especially for those who have experienced a loss of place and social networks. By giving children a sense of control, the participation of children in constructing their surroundings increases the meaning places have for them. The meaning



1 Introduction

2 **Key concepts**

I. Child wellbeing

II. Children in urban settings affected by displacement

III. Child responsive built interventions

IV. Co-design with children

3 Hands on

Engaging children in participatory design activities can have a significant impact on their development, capacities, and wellbeing



of places, and people's attachment to them, come from the relationship of people to those places through personal, group and cultural processes (Sutton and Kemp, 2002). Visioning and ultimately building spaces can be a healing process for some children who have had their place attachments impacted by displacement (Severcan, 2015).

Engaging children's caregivers in the participatory design process can also empower them and therefore have an impact on the broader society, especially on mothers and sisters who are often marginalised from decision making processes. Children's participation is also important for designers who can learn about users' culture, society, and living conditions, particularly where the cultural gap between designers and children affected by displacement is substantial (Sabo, 2001).

Children's insights, strengths and creativity are often overlooked. Children have both vulnerabilities and resilience, which will evolve depending on a diverse set of factors. While many interventions with refugee children focus on addressing negative development outcomes, it is important to understand what fosters resilience and builds on children's own insights and strengths (Tol, Song & Jordans, 2013). Co-design processes can, at a neighbourhood and community level, help foster and strengthen such resilience, while addressing related vulnerabilities.

IV.II - Challenges and risks

Common key challenges and risks of co-designing with children affected by displacement include:

• Raising unrealistic expectations

If not planned carefully, participatory design can raise unrealistic expectations among participants. This can have a negative impact on how participants feel about the final built outcome and the stakeholders involved in the intervention. Furthermore, participants might reject the intervention if they feel that their opinions are not taken into account, and that decisions are being made by other stakeholders. In a context of displacement, where individuals are often not given the chance to express their views, avoiding disappointment around participation becomes even more crucial.

• Not being able to engage with the most vulnerable

Access to the community and to the users of a built intervention can come through different sources and processes. This can sometimes pose a limitation on the capacity of the project to reach the most vulnerable individuals, as participants may come from existing networks that do not include all members of the community. In many cases, ensuring the inclusion of the most vulnerable implies allocating considerable resources to the participants' outreach phase. Moreover, when working in vulnerable situations, children can lack independence and self-direction, which can be a socialising response to their caregivers who themselves have little freedom in their daily lives.

• Not being able to identify, understand and challenge power dynamics

Similar to the previous point, participatory processes should identify existing power dynamics and aim to enable the equal engagement of all members of the community. Nevertheless, if participatory engagement is limited to short activities, and facilitators conducting such activities do not have previous experience and knowledge of the community, it will be difficult to identify and potentially challenge existing power dynamics. Choosing a team of facilitators with experience and knowledge of the local context is therefore crucial, especially in contexts of displacement, as often the most vulnerable members of the community do not get a chance to participate in decision making processes. Participatory design presents an opportunity to challenge such conditions and to generate positive outcomes for vulnerable individuals and the society in which they live.



1 Introduction

2 **Key concepts**

I. Child wellbeing

II. Children in urban settings affected by displacement

III. Child responsive built interventions

IV. Co-design with children

3 Hands on

Children's insights, strengths and creativity are often overlooked



• **Not being able to include everyone**

It is unlikely that all users will be able to engage in the participatory design process for built interventions. A possible way to address this challenge is to select participants to represent the diverse groups living in the area of intervention, even for projects predominantly aimed at children. The relevant dimensions of people's identities that must be considered varies in each context, but some to consider include: gender, age, race and ethnicity, ability, religion, nationality, sexuality. It is the role of the facilitators and the project partners to ensure that diversity is taken into consideration when selecting participants. There are different ways of including community members, as not everybody can participate in the entire process, but may provide feedback at key points. Public consultations (presented in part A) are a good way to expand participation.

• **Changing people's mindset towards children's participation**

In some contexts, including communities affected by displacement, it may be challenging to argue for the importance of children's participation as children are not seen as experts. Therefore it can be difficult to show how children can contribute to built interventions and improve the final outcome. Children's participation needs to be valued by all stakeholders to be an integral part of the process. Involving parents and caregivers may be a useful strategy to achieve better outcomes while mitigating this risk.

• **Politics and barriers to citizens participation**

In some contexts, where citizen participation is not valued or granted, and where there are hierarchical decision-making processes, there may be challenges in obtaining support from those in power for the introduction of participatory design of built interventions.

• **Lack of willingness to participate in local projects**

Displaced people often have a strong desire to return home or to move to a country where asylum is assured. This can result in low levels of emotional investment in the host community, and a lack of willingness to participate in local projects.

• **Lack of time for participation**

Many displaced people are daily wagers and participating in community-based projects may involve a loss of income. In some contexts, this may also apply to children whose work contributes to family earnings.

• **Time and budget limitations**

Organisations working in contexts of displacement often have a tendency to focus on short-term needs, often resulting in projects with a short timeline. Funding is also often limited as donors focus on more measurable outputs rather than the long-term benefits of participatory processes, which are more difficult to measure. As participatory design can be a lengthy process, it is often left out in a context where quick responses are prioritised.

Similar arguments can be made around budget limitations. As participatory design processes can be time consuming, project budgets need to allocate appropriate resources for hiring and training the facilitators of the participatory design process.

• **Participation can be harmful**

Is children's participation always good? In some cases, participation can do more harm than good. Working with a selected group within the community can increase segregation and internal divisions. Understanding the local context, the diversity of people and their lives is fundamental to planning the co-design process (see [step 5](#): Translating children's ideas into design solutions).

Despite the limitations, it is important to engage children in participatory processes, and to create empowering opportunities for children to influence built interventions. This handbook presents ways to address these key challenges and minimise the risks, while ensuring meaningful participation and a sustainable end product.



Hands on



DISPLACEMENT

Generating an idea

1



2

Building partnerships

Funding

3



A DESIGNING WITH CHILDREN

Translating children's ideas into design solutions

5

Researching local context and needs

4



6

Selecting the intervention location



Choosing materials, skills and technologies

7



Technical design

8



B PROCUREMENT AND BUILDING

Procurement and management of building works

9



10

Practitioners and communities build together



C POST BUILDING, IMPACT, AND SUSTAINABILITY

Activation, ownership and management

11



12

Maintenance and follow-up



13

Impact and evaluation



Boost local economy



Better infrastructures



Improve social cohesion



Empower children



CHILDREN WELLBEING



A

Designing with children



KEY MESSAGES

1 Generating an idea

- Ideas originate in a variety of ways and from different actors.
- Children must be at the centre of developing ideas for interventions.
- Ideas are more likely to enrol broader support if they are consistent with existing research, frameworks, and practices at different scales.

2 Building partnerships

- Children and their communities must be considered partners in the intervention.
- As co-designed built interventions require different functions, roles and capacities, complementary actors need to form partnerships.
- The expertise required draws upon very different disciplines that should find a common language.
- Discussing at length, and clarifying in writing, the objectives, roles and contributions of each actor supports successful delivery.

3 Funding

- Funding for co-designed built interventions must be adequate and take into consideration all phases to guarantee meaningful participation.
- Donors must be engaged in the co-creation process to understand the multiple impacts of such interventions.





Designing with children



4 Researching local context and needs

- In-depth knowledge of the local context and needs enables practitioners to develop context-appropriate interventions.
- Children can participate in research.
- Existing research, practices and interventions carried out by local stakeholders provide valuable learning.

5 Translating children's ideas into design solutions

- Children must be at the centre of the co-design process.
- The process of designing spaces with children requires careful planning and the preparation of tools appropriate to the context and participants.
- Younger children should be engaged through play, ensuring activities are fun and enjoyable for them.
- The process must equip children with the knowledge they need to fully participate.
- Good facilitation is key for successful participatory engagement.

6 Selecting the intervention location

- A careful and participatory selection of sites for interventions is essential for ensuring their positive impacts on children and long-term sustainability.

7 Choosing materials, skills and technologies

- The choice of materials and technologies can generate positive impact and empower the local community.
- Purchasing materials locally, hiring local labour and adopting context appropriate technologies can help boost the local economy and improve social cohesion.
- The choice of materials and technologies will have an impact on the environment and the health of workers.

8 Technical design

- The technical design should enable the hiring of local labour and children's participation during the construction phase.



Step 1 Generating an idea

Key points:

- Ideas originate in a variety of ways and from different actors.
- Children must be at the centre of developing ideas for interventions.
- Ideas are more likely to enrol broader support if they are consistent with existing research, frameworks, and practices at different scales.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Co-designed built interventions are not linear processes, they can originate in a variety of ways and from different actors. Sometimes the first step is made by children, their caregivers, and their community coming together to express a need to schools, local authorities, or NGOs. Sometimes, external actors approach local communities and organisations with an initial proposal. In this case, it is important to engage children and their communities at an early stage. During this engagement, transparency about what is offered and what resources have been secured is important, as well as ensuring that early engagements provide valuable experiences to participants. For example, activities with children to identify their needs and challenges should have value in themselves, incorporating learning, play and fun, without generating expectations.

It may not be possible to immediately engage children and their caregivers, as a number of safeguarding and other preparatory processes need to be in place before this can happen. Moreover, as this handbook will discuss, engaging children without having secured the resources and partnerships required to deliver the intervention may create expectations that cannot be fulfilled. Frustrated expectations generated by external actors are unfortunately a common occurrence, particularly in vulnerable communities and with groups who have already faced major uncertainties. It is easy to unwittingly set expectations that cannot be fulfilled, leaving a legacy of mistrust towards external governmental and non-governmental actors, which can undermine other interventions.

Before approaching children and their caregivers, it is good practice to thoroughly research what information on the local context is already available. For example, in the case of children affected by displacement, it is highly likely that government and non-governmental agencies have already conducted a needs assessment, site specific assessment, or similar activity. Some examples may include UN-Habitat's [Urban Profiling](#) work, e.g. the collaboration with UNICEF on [neighbourhood profiles for Lebanon](#); government urban observatories and platforms, datasets and reports on specific sectors (e.g. [Lebanon crisis response plan](#), UNHCR data portal). Institutions providing services to these groups, such as schools, can also provide insights on preliminary ideas (see a more detailed discussion in [step 4.2](#) - Existing knowledge and key local stakeholders).

Reaching out to other actors avoids duplication and concentrating interventions in the same area. It can help communities and areas of need

to learn from each other and plan complementary interventions. A review of existing and upcoming projects in the area can help define the idea and adapt it to what works in a specific context.

The following are examples of where intervention ideas can originate:

- Child participation structures in child friendly cities, such as Child Local Councils, Children's Advisory Boards, etc.
- Community members. For example, a teacher who recognises a need at their school, a resident who has an idea to solve a problem in their neighbourhood. They might approach organisations or people who can help them develop a proposal.
- A multilateral agency (e.g. WHO, UNICEF, World Bank) initiates a call for proposals which can target NGOs or local government.
- An NGO develops an idea for an intervention following a needs assessment based on donors' priority areas.
- A bilateral agreement provides funding to a government hosting refugees which is allocated to municipalities who decide on interventions.
- A practitioner develops an idea based on his/her experience of working with communities on a daily basis.
- National and local priorities underpinned by global frameworks (e.g. Sustainable Development Goals) encourage a range of actors to develop an idea.
- Personal interest, for example a philanthropist interested in promoting educational projects for children.

Whether the initial idea comes from 'top-down' (e.g. an international organisation) or 'bottom-up' programming (e.g. a group of children), as long as an adequate participatory process is set up early, all the different ways of initiating a co-designed intervention are legitimate and depend on the context.

Ideas generated from broader cross-sectoral partnerships tend to result in more effective interventions, for example policy attempts to make cities child-friendly. In such cases, the co-designed built intervention becomes a component of a more comprehensive programme. Where municipal plans exist, it is important to develop ideas within these frameworks to ensure the sustainability of the intervention as well its compatibility with others. Framing an idea within existing municipal, national and global frameworks can help to enrol other actors in the process and build comprehensive partnerships.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



NEPAL CHILDREN'S EARTHQUAKE RECOVERY CONSULTATION

Nepal, 2015

Following the 2015 earthquake in Nepal, Plan International, Save the Children, UNICEF and World Vision International undertook a "Children's Earthquake Recovery Consultation" in the 14 most severely affected districts. The objectives of the consultation were to hear directly from children about the challenges they were facing; to assess the impact of the crisis on their roles, responsibilities and future opportunities; and to seek their views on and recommendations for recovery.

A total of 1,838 children were engaged in the consultation process through different methods that included expressive drawing, body mapping and visioning exercises. In recognition of the different needs and perspectives, children were divided by gender and age groups (8-12 years and 13-18 years). The children who took part in the consultation provided detailed and practical recommendations. They had clear ideas about how they wanted their communities to be rebuilt and the support they needed. They saw a clear role for themselves and their communities in rebuilding after the devastation. This initiative shows that consulting with children uncovers unique perspectives and views that can enrich decision making and planning.



CHILDREN'S PARLIAMENT

Slovenia, 1990-ongoing



Photo courtesy of Matija Sušnik

The Slovenian Children's Parliament has been running yearly since 1990. It comprises more than 200 primary schools from all over the country. Each year, a chosen topic is introduced to the pupils, and then discussed on different levels: from school level through municipal, regional to the national level at the National Assembly Chamber of the Republic of Slovenia by over 100 representatives that each school elects. This enables the involvement of children in decision-making from local to national level.

The Children's Parliament enables children to speak publicly, presenting opinions and proposals about issues involving their living environment, while developing their own sense of democratic responsibility. For example, in 1992 the parliament focused on tangible suggestions for the creation of child friendly schools. Politicians were willing to consider the ideas and issues raised by the children and act to address them.



POTOCINE

Bogotá, Colombia, 2016



Photo courtesy of Arquitectura Expandida

'Potocine' is a self-construction and self-management project for the first community cinema in Ciudad Bolívar, a district of Bogotá, which has the greatest number of displaced people. The project proposal arose from the community's need for a cinema which could provide logistical support for 'Ojo al Sancocho', a collective that runs a school and a community film festival. Children, youths, adults and the elderly gather inside and around this multi-functional cinema for screenings, theatre, meetings, and workshops.

The design collective Arquitectura Expandida is allied with local community leaders and organisations that provide their expertise to implement the project. They encouraged the community to self-organise and take responsibility for their own urban environment, improving a neglected area through collective efforts.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. **Generating an idea**
 2. Building partnerships
 3. Funding
 4. Researching local context and needs
 5. Translating children's ideas into design solutions
 6. Selecting the intervention location
 7. Choosing materials, skills and technologies
 8. Technical design
- B** Procurement and building
- C** Post building, impact, and sustainability

These frameworks can:

- enrol actors by leveraging on their mandate and commitments;
- provide legitimacy;
- provide a shared language to talk about the intervention and its impact;
- offer ways to mobilise resources as donor priorities align with these policy frameworks;
- support knowledge management and sharing of best practices and lessons learnt.

Below are some examples of documents that can help frame ideas to garner support.

Local/City	The City's Master Plan or other city-level development plans; Mayor's agenda; public space strategies; neighbourhood plans; Child Local Plans in UNICEF recognized CFCs.
National	National Development Plan or national plans to implement Sustainable Development Goals.
Global	Sustainable Development Goals; Convention for the Rights of the Child; the Global Compact on Refugees; Global Compact for Migration; the 2030 Climate and Energy Framework, Convention on the Rights of Persons with Disabilities.

In order to formulate a good idea, bring partners together, and obtain the necessary funding, the context and its stakeholders must be understood. However, it is often difficult to conduct a full context analysis prior to obtaining funding, and sometimes it may be ethically problematic to engage a community in extensive field research before funding is secured. How much context analysis is needed to generate an idea and formulate a project proposal, and how much can be undertaken once the project has been set in motion, are important decisions. A number of factors are involved, including the relationship between organisations and the community, the openness of funders, and the capacities of partners to undertake research before funding is obtained. This means that several aspects detailed in [step 4](#) - Researching local context and needs - are often undertaken in earlier steps.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



Step 2 Building partnerships

Key points:

- Children and their communities must be considered partners in the intervention.
- As co-designed built interventions require different functions, roles and capacities, complementary actors need to form partnerships.
- The expertise required draws upon very different disciplines that should find a common language.
- Discussing at length, and clarifying in writing, the objectives, roles and contributions of each actor supports successful delivery.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Co-designed built interventions with children are complex and require carefully crafted partnerships. It is unlikely that a single actor can provide all the roles, functions and skills required for a successful intervention.

Actors take on different functions, roles and capacities depending on the context (see some examples in the table below). Therefore, a context-specific division of roles amongst partners is suggested. For instance, the powers, capacity, resources, political will and relationship with residents of

national, municipal and local governments will vary enormously between and within countries.

Partnerships require complementarity. To foster commitment and a sense of ownership, interventions should uphold the objectives of each party. A good partnership is one where all parties can contribute something important to the intervention. The table below presents some examples of actors, what they add to the intervention, and their motivations.

ACTORS	WHAT THEY ADD TO THE INTERVENTION	WHAT THEIR MOTIVATIONS ARE FOR THE INTERVENTIONS
Community		
Children and their caregivers	Knowledge of their community, individual and collective needs and visions, different skills, legitimacy, creative energy, desire to participate, motivate other actors	Improving their community, benefiting from the intervention, learning new skills, having fun and positive play experiences, sharing ideas, being heard, engaging with other children or residents who they may not otherwise.
Other local residents	Knowledge of their community, individual and collective needs and visions, skills, resources, their participation (often some groups are prioritised, e.g. women, youths, older persons, persons with disabilities).	Improving their community, benefiting from the intervention, learning new skills, understanding the needs, situations and perspectives of other members of the community.
Community-based organisations (including youth groups, scout groups, etc)	Knowledge of their community, a group of organised people who know each other, representation of collective interests	Improving their community, promoting their objectives
Community leaders	Knowledge of their community, representation of collective interests	Improving their community, recognition of their role
Local schools or children centres	Knowledge of the children, capacity to reach children and their families, expertise in working with children, space for the intervention, resources (human, financial)	Improving the school environment and learning, benefiting the children
Healthcare centres, clinics, dispensaries and hospital doctors and staff	Knowledge of the community, space for the intervention, resources, needs and visions	Improving the community, benefiting the children



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. **Building partnerships**
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

All parties can contribute something important to the intervention

ACTORS	WHAT THEY ADD TO THE INTERVENTION	WHAT THEIR MOTIVATIONS ARE FOR THE INTERVENTIONS
--------	-----------------------------------	--

Community

Universities	Funding, human resources, legitimacy, technical knowledge, documenting the process	Conducting research, delivering impact through research
Volunteers	Funding, expertise, skills, labour	Improving community, personal interests, learning new skills, career development

Government

Local government (municipality or specific departments, officers)	Political will, provide/obtain data on the area, outreach into communities, building/planning permits, technical knowledge, project management, maintenance	Improving the lives of their citizens, visibility, fulfilling their mission, agenda
National government (relevant ministries)	Political will, legitimacy, funding, replicability and scaling-up potential	Building local capacity, innovating, visibility, achieving their objectives

Non-profit organisations

Local NGOs	Knowledge of local context and community, specific skills, human resources	Implementing their programmes, promoting their objectives, benefiting local children and residents
International NGOs	Expertise not available locally, funding, project management, experience from other contexts	Expanding their impact, building local capacity, achieving their mission
Multilateral organisations	Endorsement, funding, legitimacy, expertise	Achieving their mission, building local capacity, visibility

Private Sector

Local contractors	Building expertise, knowledge of local materials and building practices, legitimacy	Livelihood, profit, contributing to community improvement
Providers	Goods and services, including building materials, skills	Profit, visibility, Corporate Social Responsibility
Private institutions or companies	Funding, pro-bono services (e.g. engineering), expertise, visibility	Visibility, Corporate Social Responsibility



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

This handbook often refers to organisations as the main actors in the process. However, initiatives emerge from specific people within organisations and communities who champion ideas and ensure that they are translated into action. Therefore, while the handbook discusses partnerships between organisations, in order to be successful, they require supportive people within each.

While different combinations of the above actors are possible in an intervention, below are the required functions in co-designed built interventions. Some of these roles may be played by the same actor and can vary in different contexts and interventions. An open discussion about the role of each partner, recognising each other's expertise and gaps, can help allocate resources and time appropriately to support effective collaboration.

FUNCTION	EXAMPLE OF KNOWLEDGE/SKILL	EXAMPLE OF ACTORS
Develop the idea	Knowledge of the context, local/national and global framework, creativity	Children, caregivers, residents, built environment professionals, funders, INGOs, government institutions
Form partnerships	Coordination, knowledge of actors and their roles	Funders, INGOs, NGOs, local authorities, built environment professionals, children, caregivers, residents
Draft the objectives of the partnership & roles	Knowledge of regulations, roles and responsibilities, organisational skills	Funders, INGOs, NGOs, local authorities
Research local context, or build information data base	Research and analysis, knowledge of the context	Researchers, children, caregivers, facilitators, residents, key stakeholders
Prepare for participatory activities	Coordination, knowledge of the local community, ethical protocols and child protection policies, participatory tools	Facilitators, children, caregivers, users of the space, educators, field officers, NGOs, municipalities, schools, clubs
Identify and understand local needs	Knowledge of local community, user engagement, understanding of the context, participatory research tools, communication and facilitation	Children, caregivers, users of the space, educators, facilitators, field officers, neighbourhood committees
Conduct participatory design activities	Design thinking, spatial design, participatory design tools, socio-cultural practices, engaging children, communication, facilitation	Children, caregivers, users of the space, facilitators, built environment professionals, NGOs, volunteers
Produce a preliminary design	Analysis of input from participation, design visualisation, communication	Built environment professionals, children, caregivers, users of the space, local government, NGOs
Obtain building permits	Local building regulations, safety measures	Built environment professionals, local government
Develop the final design	Spatial design, child friendly design, characteristics of the intervention site, visualization	Built environment professionals, local government, users of the space



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
 2. **Building partnerships**
 3. Funding
 4. Researching local context and needs
 5. Translating children's ideas into design solutions
 6. Selecting the intervention location
 7. Choosing materials, skills and technologies
 8. Technical design
- B** Procurement and building
- C** Post building, impact, and sustainability

FUNCTION	EXAMPLE OF KNOWLEDGE/SKILL	EXAMPLE OF ACTORS
Draft the technical design	Knowledge of local materials and building skills, technical design	Built environment professionals, contractors
Procurement and management	Knowledge of procurement policy, management	Built environment professionals, contractors, residents
Build	Knowledge of building construction, management, coordination, health and safety measures, supervision	Contractors, built environment professionals, builders, labour, caregivers, children (through structured safe activities), volunteers
Activate the intervention	Coordination, communication, knowledge of local community, user engagement	Children, facilitators, volunteers, CBOs, caregivers, users of the space, local government, NGOs
Monitor the use of the intervention	Knowledge of the intervention, user engagement, knowledge of the context	Local government, NGOs, built environment professionals, caregivers, users of the space, children
Perform maintenance	Knowledge of the technical design, building techniques, building materials	Local government, NGOs, contractor, builders, built environment professionals, users of the space
Long-term community management	Knowledge of users and relationships with other institutions, capacity to develop and adapt the space to users' needs	Community organisations, municipalities
Conduct impact evaluation	Knowledge of evaluation process, of the intervention (process and product), qualitative and quantitative data collection	Children, facilitator, external consultant, users of the space, caregivers, built environment professionals

Built interventions co-designed with children affected by displacement require a wide range of disciplines. It may not always be possible to have them all involved, and the nature of the intervention determines their relative importance. The diagram below shows some of the most important.



Diagram 5 | Transdisciplinarity



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. **Building partnerships**
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

2.1 - Drafting objectives

It is good practice that, as soon as key actors are involved in an initial idea, the parties draft a document to clarify the objectives of the partnership and their respective roles. This helps generate clarity of intent and is especially useful when actors have not previously worked together. Such document can make explicit reference to the choice of approach towards child participation. A written document also helps the process to survive changes of staff, for organisations with high turnovers.

If the project is still undefined, and signing a contract is not possible, such a document can take different forms depending on the context. For example, it can be a letter of intent or memorandum of understanding (MoU) or, in some cases, a detailed email may suffice. This initial document can be substituted by a more comprehensive contract later on, particularly once funding is secured.

An effective way to generate shared objectives and establish roles is to hold a workshop session with the key actors.

An MoU could contain the following elements:

- Parties
- Description of partners
- Fundamentals of partnership
- Responsibilities of partner 1
- Responsibilities of partner 2 (+)
- Duration
- Financial management
- Other provisions (e.g. child protection policy)
- Contact details of reference person for both parties
- Date, place and signature
- Annexes



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea

2. **Building partnerships**

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

2.2 - Children, their caregivers and other residents

In co-designed built interventions, children, their caregivers and other residents are not passive receivers of a service. They are fundamental partners who play an active role throughout the process. The role of the local community can be facilitated by community-based organisations and institutions with established relationships and networks. This includes scouts, youth groups, religious groups, health facilities, local NGOs, schools, social clubs, community centres, etc. This is very important in urban contexts where reaching and organising the participation of the target group may otherwise be difficult. In some cases, the creation of an inclusive local/neighbourhood committee for the intervention can be appropriate, particularly where existing community-based organisations and groups represent only some of the potential users of the intervention.

Having community members as part of the project staff, for example as animators/mobilisers or local researchers, is an effective strategy for securing a continuous partnership. In contexts with high levels of deprivation, paid opportunities offered by the project can generate tensions. The distribution of these positions amongst community members and the levels of pay must be carefully discussed and agreed with local actors. For example, if they are offered only to members of the refugee community, this can create a backlash from other residents.

Being transparent about the intervention objectives and scale from the beginning builds trust with the community, including children. Communication is crucial in developing this trusting relationship. The reputation of NGOs or local authorities within the community is an important asset to safeguard, as a poor reputation will shape community attitudes and participation, thus undermining the success of current and future interventions.

Powerful local actors can influence or even block projects. These can range from powerful families, local groups, or in some contexts even criminal organisations. Recognizing these is very important, as well as developing a strategy to deal with them. Interventions with and for children have the advantage that, in many cases, most community actors are in favour of interventions that benefit the children in their community.



GROWING UP BOULDER
Boulder, United States, 2009 / ongoing



Photo courtesy of Jade Cody/Growing Up Boulder

'Growing up Boulder' is an initiative by the University of Colorado, the City of Boulder, and the Boulder Valley School District in partnership with local non-profits, businesses, children and youths aged 0-18. It began in 2009 with the vision of making Boulder a model for a child- and youth-friendly city.

'Growing up Boulder' engages children in projects such as the design of public spaces, housing, and transit systems in order to include their input in local government decisions.

Projects usually arise from the planning needs of city partners. 'Growing up Boulder' staff then identify project-specific partners, including schools or other youth-serving organisations.

The initiative especially promotes the inclusion of underrepresented children and youths, such as immigrants, ethnic minorities and young persons with disabilities, to give them the opportunity to influence issues that affect their lives.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Being transparent about the intervention objectives and scale from the beginning builds trust

2.3 - Local Government

Local governments are essential actors in built interventions co-designed with children. They are instrumental in delivering basic urban services such as water, sanitation, transport, employment opportunities, protection of the environment, access to public space and its linkage to urban safety.

Local governments have the legitimacy, in most cases, of being elected by the citizens and are the closest sphere of government for attending to people's primary needs. Local governments play a fundamental role in addressing urban safety, particularly through proper urban planning, genuine human rights and local democracy.

Local governments are even more important in the context of displacement as they often have the mandate to provide many services to displaced populations, and often are the level of government with whom displaced people have most interaction. Therefore, local government must seek the participation of the displaced persons themselves to find local solutions. In particular, this handbook calls for local governments to listen to children in their cities and implement their proposals for improvements. These are often related to issues within the powers and functions of local governments, such as improving schools, public spaces, parks and playgrounds. These calls to local government build upon the excellent ways in which cities across the world are already working for the inclusion of migrants and refugees. Useful guidance, examples and recommendations are provided in the new multi-agency publication: [Local inclusion of migrants and refugees](#). A gateway of existing ideas, resources and capacities for cities across the world (CMI et al., 2020). The publication's focus on multi-level governance, urban and territorial planning, and local economic development are relevant to this handbook.

There are also significant political issues and perceived costs of accepting and integrating displaced populations. Many cities receiving large numbers of displaced people are in developing countries already experiencing conflict or political tensions, and host communities may already endure poor living conditions. Sometimes, this constrains the political will regarding providing support to displaced communities. This handbook will show how, by involving both host and displaced communities, co-designed built interventions can help diffuse some intercommunal tensions.

Finally, while local governments are a key actor, it is difficult to generalise their role because of their diversity, which is linked to:

- Legal frameworks, giving them different powers;
- Organisational structures and fiscal autonomy;
- Financial and economic resources;
- Expertise and capacity;
- Receptiveness and political will;
- Size of the city: in a small town there may be direct interaction with the mayor, while in larger cities these types of initiatives are often led by other elected officials/municipality staff;
- Staff personality and interests;
- The location of the site chosen for interventions also matters. For example, the site might receive less interest from the mayor or governor if it is an area where most of people are opposition party supporters.

It is essential to acknowledge the varying degrees of commitment (if any) from local or national governments towards displaced populations. When hosting countries or cities have no intention to support the development of interventions for displaced populations, co-designed built interventions with children may still be possible. However, a different approach will be required as community and other humanitarian or development partners must find ways of working, in spite of the limited political will.



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



CHILD PARTICIPATION IN HUMANIZING DISPLACEMENT AND RESETTLEMENT PROCESSES

Delhi, India, 2000-2005

In 2000, 529 families were evicted from an informal riverbank settlement called Gautampuri. A consortium of 42 local NGOs called Sanjha Manch, many of whom had previous experience of working with children in informal settlements, took action to respond to the eviction threat. Sanjha Manch leaders, in consultation with parents, decided to involve children and youths in the campaign to save Gautampuri. The power dynamic of the campaign initially was very much in favour of adults, the hierarchy being NGO, parent, and then children. When all else failed, the primary planners of the movement decided to bring in children to participate more fully.

Children participated in community workshops run by NGOs and drew out a plan to meet all the important city officials with the plea of letting them stay in Gautampuri. Different government officials agreed to meet with the representatives of the group after pressure from organised protests and media reporting.

Children's involvement led to small negotiated victories, such as the issuing of bus passes to children to commute to their inner-city schools for the academic year. However, the campaign set the stage for a larger PIL in the Delhi High Court demanding a stay order on evictions. Children's documentation of the movement and conditions of the resettlement site were admitted as evidence. Though the court ruled against the stay order, it ordered the state to first secure basic facilities at a new site before resettling people. This limited victory was a landmark in the history of forced evictions in Delhi, as for the first-time basic housing facilities were considered a state responsibility.

Children stayed involved as active citizens and played a significant role in greening their new neighbourhood in Bhalaswa. They formed children's clubs that served as platforms for child-centred community development and citizenship.



Photo courtesy of Ankur Trust

Chatterjee, Sudeshna (2007). ["Children's Role in Humanizing Forced Evictions and Resettlements in Delhi."](#) Children, Youth and Environments 17(1): 198-221



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



HABITARTE

Bogotá, Colombia,
2004 / ongoing

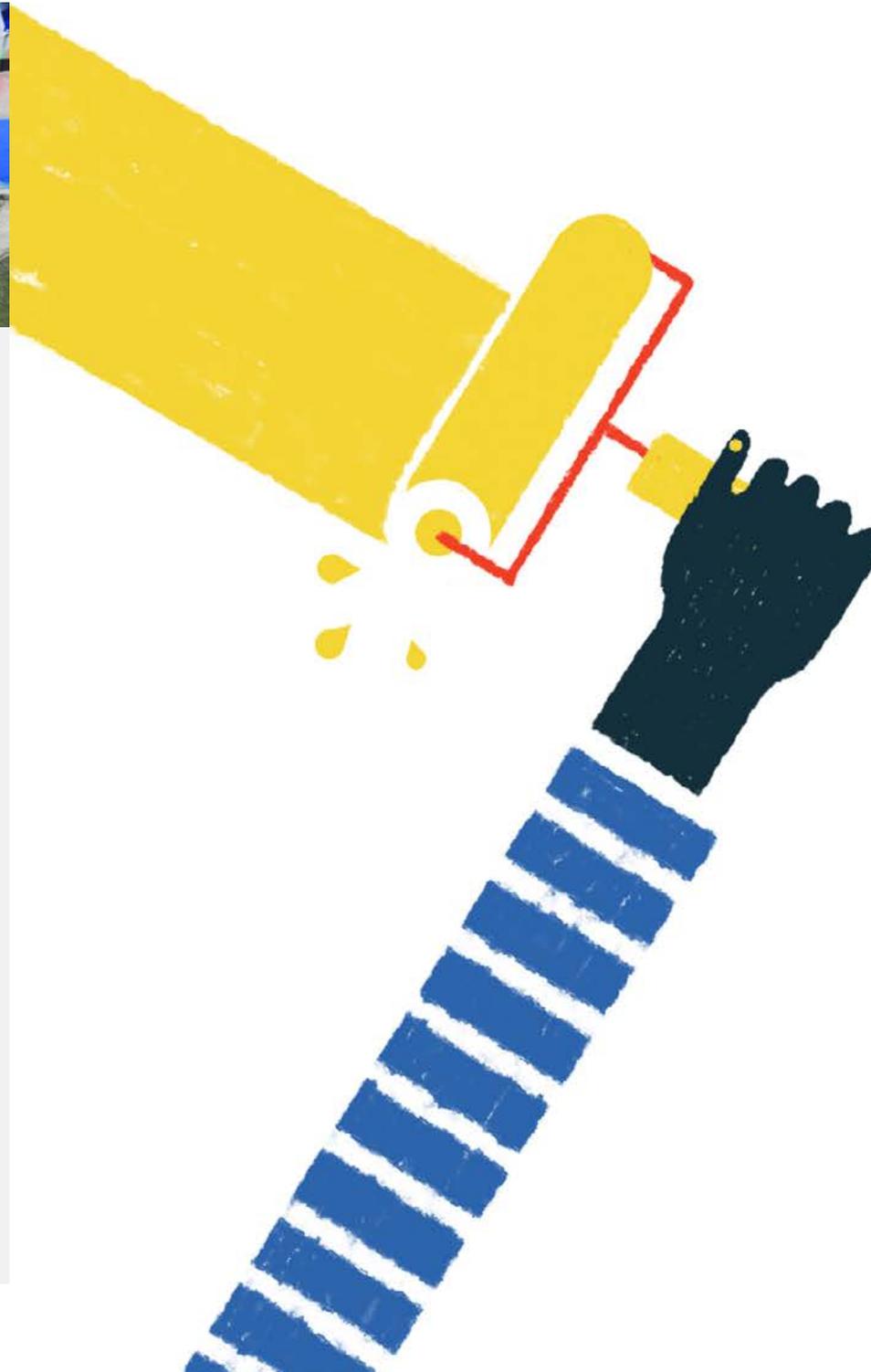


Photo courtesy of Secretaría Distrital del Hábitat

'HabitARTE' is an urban art-based upgrading programme administered by the Housing Department of the City of Bogotá. It seeks to involve citizens in the improvement of the façades of buildings and public spaces located in informal settlements, many of which host significant numbers of internally displaced people.

City officials and partner institutions provide guidance to the communities, leading them towards self-management. Local residents are provided with training in different arts and crafts and decide together which artworks to display and which colours to use. The interventions are accompanied by participatory workshops with children, youths and the elderly to define the ways in which neighbourhoods will be transformed. Children paint their schools and other public spaces, fostering a sense of ownership and pride. Moreover, these activities become an opportunity to organise playful celebrations.

'HabitARTE' has already upgraded around 95,000 façades in 83 neighbourhoods. It promotes participatory processes, strengthening community cohesion and social inclusion. The initiative has also increased citizens' confidence in the public administration. It uses interventions in public spaces and façades to reach vulnerable households and then assists them with social support that strengthens livelihoods, ultimately benefiting children. By bringing together children, youths and the elderly in transforming the aesthetics of their communities, the project generates convivial relationships that improve community cohesion, making neighbourhoods safer for children.

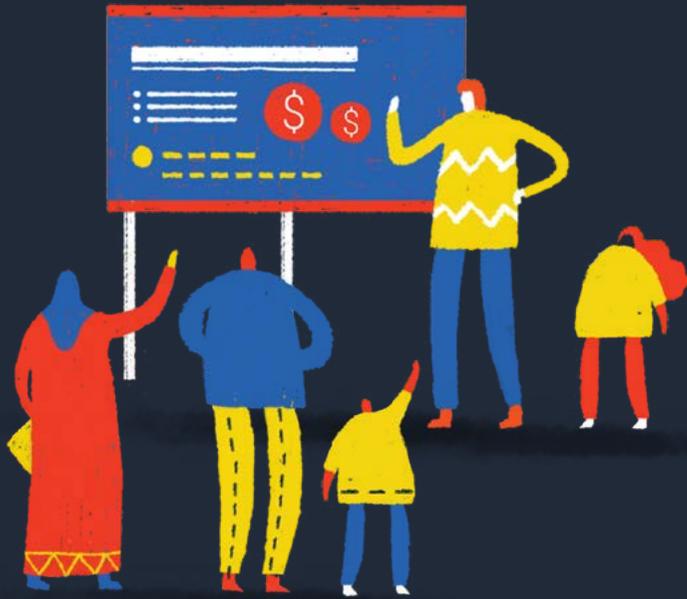


- 1 Introduction
- 2 Key concepts
- 3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
 2. **Building partnerships**
 3. Funding
 4. Researching local context and needs
 5. Translating children's ideas into design solutions
 6. Selecting the intervention location
 7. Choosing materials, skills and technologies
 8. Technical design
- B** Procurement and building
- C** Post building, impact, and sustainability



Step 3 Funding

Key points:

- Funding for co-designed built interventions must be adequate and take into consideration all phases to guarantee meaningful participation.
- Donors must be engaged in the co-creation process to understand the multiple impacts of such interventions.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships

3. Funding

4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Built interventions co-designed with children affected by displacement have a range of impacts beyond those of other built interventions, and they require an appropriate allocation of resources. As funders often play a significant role in the architecture of a project, a solid partnership and open communication with funders, so they can gain a full understanding of the process, can ensure continued support and the use of an appropriate metrics for assessing the value for money of such interventions.

Below are some examples of budget lines that can be considered when planning co-designed built interventions. Funding should be adequate for the time required for each phase.

In some cases, the long-term management/planning of a space might also include thinking about its maintenance. For example, it could strategically help to develop self-financing initiatives together with the key stakeholders, to help fund the maintenance costs of the newly built space. A public park might include space for a small shop to sell coffees, snacks, etc. with an agreement that some of the profits will be invested in the park's maintenance.



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea
2. Building partnerships
- 3. Funding**
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

BUDGET LINE EXAMPLES OF BREAKDOWN

CONTEXT RESEARCH

- Salary costs or fees for researcher to conduct context analysis
- Salary costs or fees for researcher / built environment professional to research building materials (e.g. identify local materials and businesses)
- Field work personnel expenses (e.g. transport, food, accommodation)

PARTICIPATORY ENGAGEMENT

- Salary costs or fees for facilitators to conduct participatory design activities
- Co-design workshops expenses (e.g. room hire, stationery, refreshments)
- Local transport and other expenses for participants
- Personnel expenses (e.g. transport, food, accommodation)

TECHNICAL SURVEY

- Salary costs or fees for surveyor to conduct site survey (dimensions and levels)
- Salary costs or fees for surveyor to conduct specific analysis (e.g. soil composition, structural analysis of existing structure)
- Personnel expenses (e.g. transport, food, accommodation)

LAND/PROPERTY COSTS

- Rent
- Utilities (e.g. electricity, water)

BUDGET LINE	EXAMPLES OF BREAKDOWN
BUILDING COSTS	<ul style="list-style-type: none"> • Cost of building materials • Contractor fees • Salary costs or fees for local labour (when done by community, childcare may also be needed) • Health & safety provisions (e.g. first aid kit, personal protection equipment)
ARCHITECTURAL DESIGN	<ul style="list-style-type: none"> • Design salary costs or fee for architect or relevant built environment professional • Personnel expenses (e.g. transport, food, accommodation)
ENGINEERING	<ul style="list-style-type: none"> • Salary costs or fees for engineer to conduct structural design • Salary costs or fees for engineer to conduct climatic design studies
TENDER	<ul style="list-style-type: none"> • Salary costs or fees for built environment professional / procurement officer to prepare and conduct the tender process
CONSTRUCTION SUPERVISION	<ul style="list-style-type: none"> • Salary costs or fees for built environment professional to conduct supervision • Personnel expenses (e.g. transport, food, accommodation)
ACTIVATION	<ul style="list-style-type: none"> • Inauguration event expenses (e.g. stage hire, refreshments) • Personnel expenses (e.g. transport, food, accommodation)
MAINTENANCE	<ul style="list-style-type: none"> • Cost of building materials • Fees for provider to conduct maintenance • Salary costs or fees for built environment professional to supervise maintenance works • Personnel expenses (e.g. transport, food, accommodation)
MONITORING AND EVALUATION (M&E)	<ul style="list-style-type: none"> • Salary costs or fees for M&E external consultant • Personnel expenses (e.g. transport, food, accommodation)
LONG-TERM MANAGEMENT	<ul style="list-style-type: none"> • Running costs for personnel • Running costs for activities



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
- 3. Funding**
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability



REFUGEE CAMPS EDUCATION FACILITIES

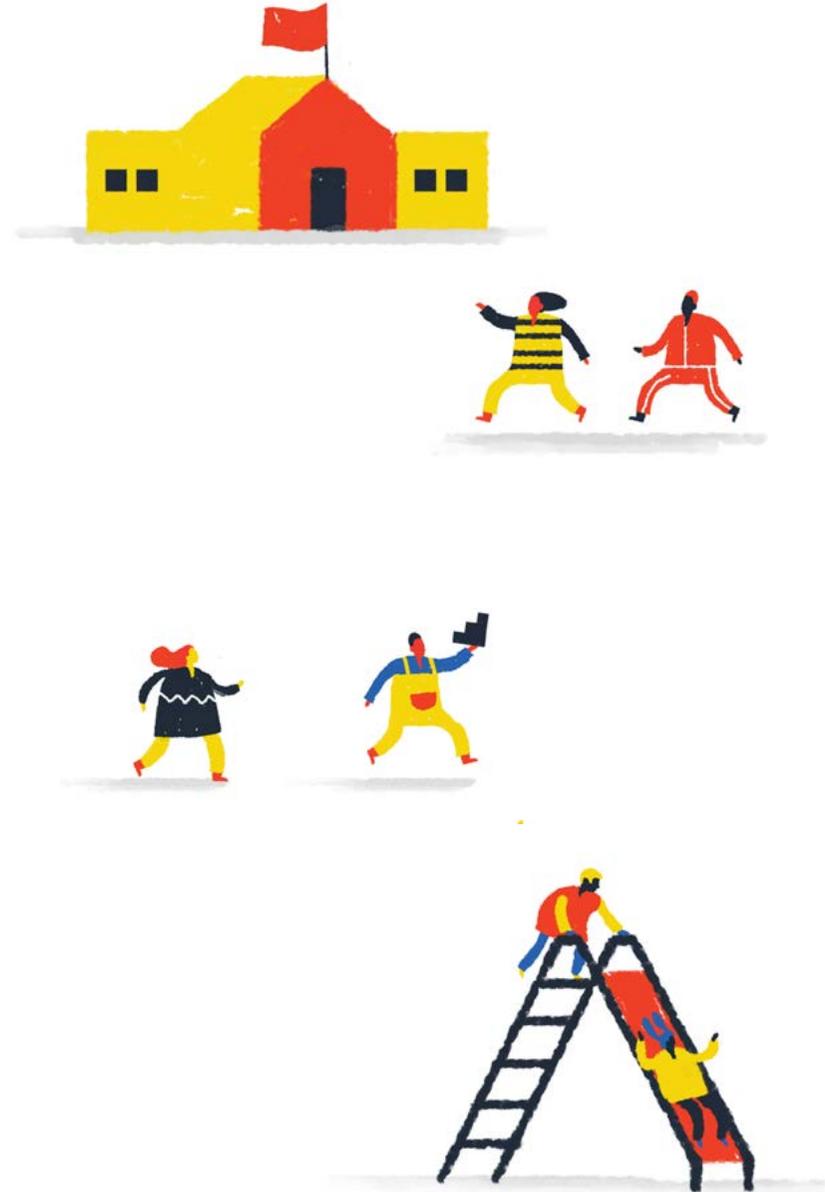
Rwanda, 2013/2015



Photo courtesy of ASA Design LTD

The design for the education facilities in refugee camps Kigeme, Mugobwa and Nyabiheke is based on the pilot projects of pre-primary schools. It has been developed to set a standard for education facilities within the special environment and social realities of the refugee camps across Rwanda.

The project was funded by UNICEF, which played a crucial role as it defined an innovative teaching strategy, provided logistics, and helped coordinate the different stakeholders involved in the process. The donor acted as an effective project partner and worked together with headmasters, engineers, contractors and community members to guarantee the long-term durability of the schools.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



Step 4 Researching local context and needs

Key points:

- In-depth knowledge of the local context and needs enables practitioners to develop context-appropriate interventions.
- Children can participate in research.
- Existing research, practices and interventions carried out by local stakeholders provide valuable learning.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Comprehensive research into the local context and needs should involve children, residents, partners, and other local stakeholders. The research aims to deepen the understanding of local stakeholders, populations, diversity, social networks, socio-cultural practices, residents' livelihoods, infrastructure and services, local governance structures, power relations and space uses. The extent of this research will depend on how much information has already been collected during the start-up phase and the amount already held by partners.

The context analysis should focus on understanding children's daily lives in the local urban context, and the dimensions that impact their wellbeing. To fully understand children's wellbeing, caregivers, siblings and educators should also be included in the research. It can highlight the challenges and opportunities for the children in the urban context, and provide the basis for planning activities to design the intervention. This research may best be facilitated by members of the team with prior knowledge of the context, especially if they already know the residents and speak the participants' language(s).

For built interventions, the context analysis should consider different spatial scales, e.g. neighbourhood, city, and country. Local issues, needs and dynamics, and the potential impact of an intervention, should be understood in relation to these scales.

The context analysis should focus on the location and objective of the project. For example, if the project aims to build a nursery for displaced urban communities, the context analysis will focus on children aged three months to four years, their caregivers, the spaces they inhabit, and how other local nurseries operate.

It may be useful to look at literature and documents from other contexts to gain more clarity on what needs to be researched and understood, and how processes work elsewhere. For example, there may be insufficient information on the situation of children's rights in the country where the intervention is planned. The context analysis may also help to narrow and further define the intervention site, objectives and users.



IIED - URBAN CONTEXT ANALYSIS TOOLKIT

A comprehensive toolkit for urban context analysis is the  **'Urban context analysis toolkit'** (IRC, 2017), 'designed for organisations wishing to conduct an urban context analysis of a man-made crisis or one leading to population displacement to an urban area'. It includes ten tools with a step-by-step narrative guide and divides the context analysis into three phases: preparation, data collection and analysis, and documentation.



SETTLEMENT PROFILING TOOL - A SPATIAL ANALYSIS FRAMEWORK FOR SETTLEMENTS ACCOMMODATING DISPLACED POPULATIONS

The  **'Settlement Profiling Tool'** (UN-Habitat & UNHCR, 2020) guides humanitarian and development professionals through an iterative process of investigation. It aims to develop a common baseline of information to support coordination and planning, particularly in situations where protracted displacement has occurred.

It considers cross sectoral areas of work, which also include social inclusion of various groups, presented with spatial analytics and data mapping. This will form the basis for recommendations regarding interventions (be it at the scale of urban design, or large financial infrastructure investments).



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Comprehensive research into the local context and needs should involve children, residents, partners, and other local stakeholders

4.1 - Guiding questions

The context analysis may cover some of the following aspects to gain a better understanding of children in relation to the built environment. Facilitators need to unpack these into more specific questions relevant to their local context. A number of tools to involve children and other stakeholders in the production of this information will be presented in the next steps.

Children and services:

- What are children's living conditions in this context?
- What are the relevant dimensions of diversity (e.g. age, gender, ability) of the children and how do they matter in their everyday life?
- Which services and infrastructures are available to the children and their families? What is the quality of these services and infrastructures? Are they safe? Are they (freely) accessible to everyone? How do they access them?
- Which actors are targeting the needs of children affected by displacement: health, social, economic, shelter, aid, etc.?

Children and built environment:

- How do children relate to the built environment? How do children access the spaces they inhabit or play in? How do they use the spaces they inhabit? Where do they play? Where do they spend time with friends? Where are the spaces where children feel safe and happy, and where don't they?
- What are the place-making practices in spaces relevant to the intervention?
- What is the cultural understanding of children's spaces in this context?
- Where do these families feel safe with the children? Where would parents feel comfortable sending their children?
- What makes a space safe, from the point of view of both children and their caregivers?

Culture and history:

- What existing socio-cultural practices, beyond the intervention site, link to project objectives?
- What are the community's social and cultural values that shape everyday life and social relations?
- How is childhood viewed by society?
- How are displaced people integrated (or not) into society now and historically? What are relations like between displaced and local people? What are the attitudes towards displaced people?
- What are the personal histories of displacement? What are the changes of spatial experiences before and after displacement? For example, before displacement children might have attended a formal school in a building, but after they were displaced, they attend an informal school in a tent. As another example, children who lived in rural settings might have had freedom to access fields, gardens and parks in their home countries before displacement whereas now they are confined to their small apartments (in urban settings) isolated from their communities and green areas.

Legal framework:

- What is the legal status of the displaced populations (for example: right to work, right to reside, etc.)? How does the legal status differ from one community to the other?
- What is the legal framework for built interventions for displaced populations in this context? (for example, in Lebanon no permanent structures can be built to house Syrian refugees)
- How do these legal frameworks impact the daily lives of people?



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



KLONG TOEY COMMUNITY LANTERN

Bangkok, Thailand, 2011



Photo courtesy of TYIN tegnestue

The 'Community Lantern' is based in Klong Toey, the largest informal dwellings area in Bangkok. The area suffers from a lack of public services, high unemployment rates, violence and crime due to its considerable drug problem. The aim of the project was to provide a safe space for children, and encourage community interaction.

The designers spent over a year researching the physical, social and cultural environment and getting to know community members to establish a trust-based relationship. Local residents were involved in collaborative activities and temporary interventions throughout the process to initiate productive collaboration.

To make it fun for children to participate in workshops, the designers used interactive solutions such as wool strings and colour stickers to mark out children's daily routines and to point out sites of interest, such as the places where they spent most of their time. The second phase of the process involved wider interaction with the community and the implementation of a permanent intervention in one of the studied areas.



MOVING SCHOOL

Mae Sot, Thailand, 2012

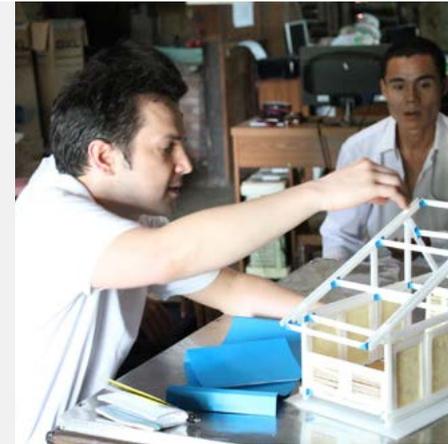


Photo courtesy of Building Trust International

Displaced communities generally do not have the right to own land in host countries, therefore infrastructure interventions provided by aid agencies are rare, because the investment routes are not secure.

In the Thai town of Mae Sot, Burmese refugees have been uprooted every few years due to their lack of land rights, leading to an absence of long-term security.

The 'MOVING school' project provided an effective, practical and legally feasible solution that ensured an education for the displaced children. Flat-packed relocatable schools were constructed, thereby adopting a sustainable and long-term approach. The core idea was to design educational buildings that could be easily dismantled, transported and then re-assembled by the community.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability



4.2 - Existing knowledge and key local stakeholders

Much information is available online in the form of articles, publications, project reports, etc. The urban context adds an element of complexity due to the density of diverse populations living in the same geographical area. A literature review can help navigate this diversity, but primary research in the field can prove very helpful, as people will provide useful insights into the context and its complex dynamics. Local sources may include universities, municipalities, NGOs, and other organisations, but these can be hard to find online. Therefore, contacting local entities to explicitly ask them for information is recommended. This may take some time, so starting early will avoid delaying the process.

Stakeholder mapping helps to identify the influential stakeholders in a specific context. Stakeholders can be identified during the research and through local partners. The stakeholder list should be populated throughout the different intervention phases (and often needs to be undertaken when generating the project idea), and helps identify with whom to conduct Key Informant Interviews (KIIs), surveys and other activities. Ensuring that enough information is collected can enable inclusive engagement in the next phases of the intervention. For example, engagement with different groups living in the same neighbourhood is possible only if they were identified during the context analysis.

4.3 - Field research

Engaging members of the broader community, not only those living near the site of intervention, in the collection of data allows an understanding of the complexities of the urban context and local needs. It is through investing time in getting to know the community, including the children, that successful engagement in subsequent activities can be achieved. It is important for child protection policies to be in place from the project's start, and that measures to minimise the risk of child abuse or exploitation are agreed. When engaging broader community members, the correct balance between suggesting and listening should be found, for example, suggesting a specific site in order to trigger discussion about the use of that type of space.



KEY INFORMANT INTERVIEWS

Key Informant Interviews (KIIs) are qualitative interviews of key stakeholders who are likely to provide information, ideas, and insights on a particular subject of interest. KIIs can be conducted with adults and youths, and use a set of questions developed specifically to answer identified data gaps.

See the Agency for International Development's report for more guidance on ['Conducting Key Informant Interviews in developing countries.'](#)



FOCUS GROUP DISCUSSION

A Focus Group Discussion (FGD) is a small group discussion facilitated by a trained moderator. It gathers people with similar backgrounds or experiences to discuss a specific topic of interest. FGDs can be organised with different groups and, depending on the project aims and context, may be divided by age or based on another dimension. The facilitator introduces topics for discussion and helps group members to participate.

FGDs provide a platform for people to talk with each other. They can be conducted with children.

When conducted with children, FGDs are usually paired with participatory and creative activities. For example, during FGDs conducted by Save the Children in Kabul, Afghanistan, while facilitators gathered children's views on their daily lives and experiences, 'body mapping' (See [Tool 9](#)) was integrated as well. See ['The Children of Kabul: Discussions with Afghan families'](#) (2010).



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Investing time in getting to know the community, including the children



UNIÓN ALTO SANIBENI NURSERY AND PRIMARY SCHOOL

Tanquin, Peru, 2019



Photo courtesy of Semillas

This nursery and primary school are located in Union Altosanibeni, an isolated indigenous community in Peru. The school serves the children of the community and also benefits the inhabitants of the region.

The school was built using a participatory approach. During a series of participatory workshops, community members provided insights into locally available materials that could be used to build the main components of the school, where to find them, and how to transport them to the site. Participants brought to attention some site-specific challenges, such as drought periods during August, and thus the need to adequately manage the water supply for construction. They also informed the designers that it would not be possible to use local wood for the construction because the trees in the area were protected.

Children were involved during this phase. Through playful activities, facilitators asked them about their daily routine, with a focus on activities conducted during school hours. Children also helped to envision the school space, expressing through drawings their visions and needs, such as larger classrooms, a library and well-equipped toilets.

There are many tools available that can facilitate data collection on the ground. For example, the [Kobo Toolbox](#) can be used for mobile data collection. It is an open-source tool for field data collection, optimised specifically for humanitarian actors working in remote (off-line) or complex (usually understudied or fast changing) areas.

A citizen science approach trains residents to become co-researchers and to frame the questions and analysis. This can allow an in-depth self-assessment of people's local conditions. See the ['Participatory Spatial Intervention'](#) report by CatalyticAction to learn more about this approach and its potential.

Children can also lead research into their own lives. The Save the Children ['Child Led Data Collection'](#) guide explains how young people can undertake research and create positive change. A comprehensive guide to engaging young children in research is the Bernard van Leer Foundation ['Steps for Engaging Young Children in Research'](#).



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

4.4 - Users' needs

Engaging users is important because:

- **They know the place where they live best**

Communities exist within a specific context and construct their daily lives accordingly, making them the experts of the built environment they inhabit and shape.

- **They hold unwritten stories**

Local residents' stories can offer valuable insights into a place's history, and its social and physical transformations.

- **They have already developed ideas from which to learn**

Communities will have developed specific skills to cope with the challenges presented by their context. Any project can learn from the coping mechanisms that are already present.

- **Perception of built spaces is subjective**

Individuals experience space differently. There is no universal design idea that works for everyone. Many factors, such as culture or religion, contribute to spatial experience. For this reason, when designing built spaces, any spatial choice must be discussed with the final users.

When designing spaces with children, user engagement must also extend to children. Children experience space differently from adults, so design choices for children cannot be based only on input from adults. Children must be considered as agents and rights holders, as powerful co-creators of knowledge, and as experts on their own lives. Children's participation provides researchers and practitioners with unique knowledge about children's life experiences. Young children can also be engaged in participatory activities together with their caregivers.

Designers should try to apply their knowledge of spatial awareness by designing from children's point of view. The Bernard van Leer Foundation advocates this approach in their  'Urban95' project. Caregivers can contribute to children's input into the design process, as they play a major role in children's lives.



EDGE OF PLAY

Talbiyeh Refugee Camp, Jordan, 2008



Photo courtesy of Febrik

Part of UNRWA's Talbiyeh Camp Improvement programme, 'Edge of Play' is a pilot project that focuses on community participation. Aimed at negotiating the right of space for underrepresented groups such as children and women, Febrik worked directly with such groups through a participatory design process.

The project is built upon Febrik's long-term research, started in 2003, in different Palestinian refugee camps across Lebanon and Jordan. Through the use of child-led creative processes such as art, film and photography, Febrik collected findings about the social dynamics, use of public spaces, and children's play practices in the camps. The workshop participants also developed different site-specific projects to highlight the needs of children and their families. The results included theatre pieces, play manuals, installations, and architectural spaces such as the so-called 'social playgrounds'. These are intergenerational and multi-functional public spaces that encourage their shared use.

In the case of Talbiyeh Camp, the proposal comprised of a play space and meeting area for women that could be transformed into a wedding venue. The 'playground' was not confined to one area, but fragmented into play pockets in the heart of the camp. These were informed by observations of children's informal play activities in different urban contexts within the camp.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Children must be considered as agents and as experts on their own lives

Forming neighbourhood committees, if they do not exist already, helps facilitators include diverse parts of the community. The committees can be formed of children, youths, and adults who volunteer some of their time for neighbourhood improvements. Committee members could include motivated members of local groups, representatives of the municipality, and other key stakeholders from different nationalities, genders, religious and educational backgrounds.

The following list presents some of the participatory tools that enable an understanding of users' needs in relation to the built environment.



TRANSECT WALK

Suggested age: 4+

During transect walks, children walk through the neighbourhood where the intervention is located accompanied by the built environment expert. They observe and interview passers-by while drawing a sketch map of the walk, with the facilitator providing help with the visualisation.

This tool enables the built environment expert and children to learn about local needs directly. Its visual focus enables an exchange of knowledge between the children, community members, and the facilitator. Choosing the day and time to conduct the transect walk can have an impact on its results.

Transect walks can help address the following questions:

- What specific locations are of particular importance to children and why?
- How are people interacting in specific locations?
- What are the main land uses along the transect?
- What are their features and elements?
- What are the participants' needs along the transect?
- What are the problems?
- What are the spatial opportunities?



PARTICIPANT OBSERVATION

All ages

Participant observation is a tool used to gain a deeper understanding of a specific situation in a certain location by both observing and engaging in the activities of people within that location. Participant observation, when accompanied by conversations with children and caregivers, can give researchers greater insight into young children's lives and their use of space.

Older children, accompanied by an expert, may conduct participant observation themselves and observe how people use the space, engage with others, and ask questions to learn about others' experiences. This can also be carried out in small groups. This tool allows children to be critical about the built environment around them, and to pay attention to aspects that may otherwise go unnoticed. It also enables the built environment expert to analyse the children's cultural perception of space. For example, a child may wonder why a woman is sitting alone on the street, the facilitator understands that the child finds this act strange.

Carrying out participant observation at different times of day can provide a deeper understanding of the space.

Participant observation can help address the following questions:

- Who uses the space?
- How are people using the space? For what purpose? (e.g. for socio-spatial practices?)
- When are people using the space? How many times a day?
- What are the spatial problems and opportunities?
- What is the cultural perception of the space?



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



PARTICIPATORY MAPPING

Suggested age: 4+



Photo courtesy of CatalyticAction

Participatory mapping involves creating maps through a process that identifies the relationships between places and local communities, reflecting local communities' social and cultural understanding of landscapes.

Using maps, participants can examine different aspects of the focus area (access, walkability, etc.) and visualise their ideas (for example: 'here we should add this'). Mapping exercises can use satellite images and 3D models of the focus area to engage with the participants. With children, using 3D models can make it easier for them to grasp the complexities (i.e. spatial organisation) of a space and to engage with it in a playful way. Although 2D representations may be more appropriate for younger children. Visualising participants' ideas can happen through different creative means: stickers, pins, sticky notes, photographs, drawing, etc.

See IFAD's report on [Globe icon 'Good practices in participatory mapping'](#) to learn more about this tool.

Participatory mapping can help address the following questions:

- What are people's locations of interest?
- Where are infrastructures located and distributed (e.g. schools, parks, health centres, water points, places of worship, play areas, markets, public transport)?
- What are people's needs in these locations?
- What are the spatial problems and opportunities?
- What elements characterise the area or site of intervention, for example: pavements, trees, bins, shops, etc.



PHOTOVOICE

Suggested Age: 4+



Photo courtesy of CatalyticAction

The 'Photovoice' tool is a participatory action research tool that involves giving participants a camera to record their lived experiences and perspectives in relation to the research question(s). It enables people to use photo images and/or video to capture aspects of their lives and share them visually and verbally with others, including their peers, researchers, city leaders and policy makers. Environments and experiences are visualised through the lenses of different participants. Children can use this creative tool to easily assess, document and communicate their individual and common conditions and needs.

For example, Photovoice was used in the [Globe icon 'Adolescent Lives'](#) research project (UCL- CatalyticAction) to learn from young people's interactions with other people and environments about the factors that affect their mental health.

See: The Community Tool Box's section on [Globe icon 'Implementing Photovoice in your community'](#) to learn more about this tool.

Photovoice can help address the following questions:

- What are the participants' locations of interest?
- What do they like and dislike about the area or site of intervention?
- Where do they feel safest or happiest, and why?
- What stories are there about the area or site of intervention?
- What are the lived experiences of participants?
- What environments do participants live in and use?



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



DAILY ACTIVITY MATRIX

All ages

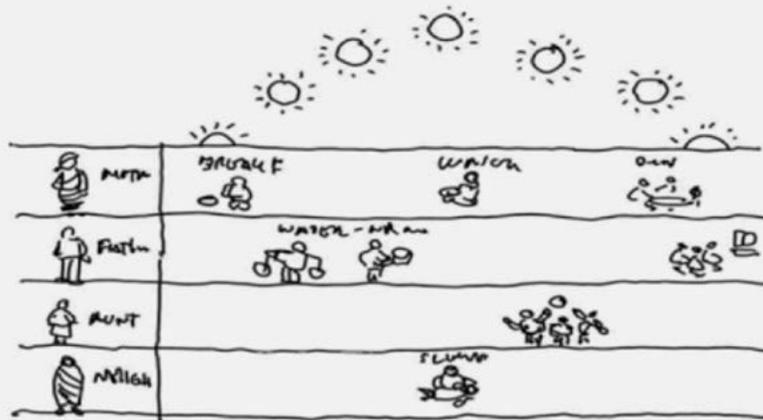


Photo courtesy of UNICEF

The 'Daily Activity Matrix' is a tool that can be used with a small group of children to learn about their typical day, from the time they wake up until they go to sleep. The activities are recorded in the table as the day progresses, forming the matrix. Children can use text and/or drawings to record their activities and locations. This tool can be used with caregivers to learn about young children's lives, while school aged children can engage in the activity themselves. A more complex version of this tool involves collecting more precise timings to quantify how much time children spend engaged in different activities, for example, play, sleep, travel, care of their siblings, housework, paid work, or work with their families. This can reveal differences based on age and gender that can inform design solutions.

The Daily Activity Matrix can help address the following questions:

- What does a participant's typical day look like?
- How do daily activities change from one day to another?
- What are the risks they face?
- Where are the gaps in daily activities that could be filled?



TWELVE QUALITY CRITERIA (GEHL STUDIO)

Suggested age: 8+

Gehl studio developed the [Twelve Quality Criteria](#) to research how public spaces are experienced by their users. It is structured around three themes: protection, comfort and enjoyment. Participants survey the public space selected, assessing whether it lives up to the criteria. For every criterion, participants give a score: happy, neutral or sad face.

Protection	Comfort	Enjoyment
Protection against traffic and accidents.	Options for mobility.	Options for seeing.
Protection against harm by others.	Options to stand and linger.	Options for talking and listening/hearing.
Protection against unpleasant sensory experiences.	Options for sitting.	Options for play, exercise, and activities.
		Scale.
		Opportunities to enjoy positive aspects of climate.
		Experience of aesthetic qualities and positive sensory experiences.

Adapted from Gehl studio

The survey could be adapted for children of different ages. For example, when conducted with younger children, relevant vocabulary should be used, sentences should be kept short and clear, and images may be incorporated to make the survey more engaging.

The 'Twelve quality criteria' can help address the following questions:

- What are the different features of a public space that are protective, comfortable and enjoyable for its users?
- What sections of the space can be improved?
- What are the most important features of the space for users?



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability



BODY MAPPING

Suggested age: 4+



Photo courtesy of International Play Association

This tool is most effective when used by a group of children that are similar in age, background and gender. Children draw around the body shape of one of their friends to use the 'body map' shape to identify issues that are affecting them through the senses (see, hear, smell, touch, feel). This can help children to think more personally about these issues, feelings, and experiences: their likes, dislikes, rights, needs in order to be healthy, etc.

To ensure the correct use of the body map, the facilitator needs to be sensitive to diverse socio-cultural religious contexts and understand the children's cultural and religious beliefs.

For example, the body mapping tool was used by the APC (Access to Play in Crisis) research in Nepal with children displaced by the Gorkha earthquake, to record their experiences. Children expressed their feelings, spoke about the crisis, their coping mechanisms, their physical environments and their spaces of play and socialisation (IPA, 2017).

See BVL's report  **'Steps for engaging young children in research'** (p.115-118) to learn more about this tool.

Body Mapping can help address the following questions:

- What are the issues affecting the children?
- How do they experience the spaces around them through their senses: hearing, seeing, touching?
- Where do they feel safe/unsafe and why?
- Where do they go in the neighbourhood?



THE MAGIC CARPET

Suggested age: 3-5

The Magic Carpet is a tool that can be used to engage young children in conversations about their environments (see Clark, 2017). The facilitator takes photographs of landmarks in the area from a child's perspective (child's height), e.g. parks, playgrounds or other public spaces. These can be supplemented by photos taken by the children themselves of spaces they use, or by photographs of parks and play spaces in other locations.

The room where the consultations take place is converted into a 'Magic Carpet', where children are invited to sit to be transported to different places as the images are projected onto a wall. Conversations are then encouraged about the children's perceptions of these places, their likes and dislikes, and their use of them. This provides insights into children's knowledge of their wider environment and the different elements of the environment that are important to them. The photos of parks and public spaces from other locations allow for comparisons to be made and for children to point out the aspects of these photos that they like or do not like. This tool can be extended by allowing the children to take the facilitator on a tour of their favourite places.

This 'Magic Carpet' can help address the following questions:

- What spaces within their environment are young children aware of?
- What are young children's perspectives of the spaces available to them?
- How do young children experience these places?
- What aspects of their environments do children like or not like?
- What spaces are not accessible or available to young children and why?



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

PROMOTING SAFE COMMUNITIES

Mumbai and Bhopal, India, 2014

Promoting Safe Communities is an urban programme established in Mumbai and Bhopal by UNICEF and its partners. It aims to develop a Safe Community model with the participation of communities and local stakeholders.

The first phase consisted of a participatory mapping process to understand and document the protection and safety concerns of children living in selected informal settlements of the city. This formed the baseline for developing the Safe Community model.

In each location, the mapping activities involved children, adolescents and adults from the local community. They had the dual role of trained researchers and respondents. Over a period of six months, empirical data was collected via different methods, such as household survey questionnaires and observation checklists. These tools were designed to enable children to make analytic observations at the individual, family and community level and to map safe and unsafe spaces. The data was integrated on to a GIS platform by UNICEF's technical partner, Action for Children's Environments, who designed the participatory mapping exercise.

Pilot projects were then initiated in each of the selected communities and resettlement housing sites suggested by the mapping. They implemented measures to reduce unsafe conditions regarding housing, access to public places, public toilets, walking routes to school, etc.. As an example, some open ground used as a dumping site was converted into a playground, with the active participation of children.

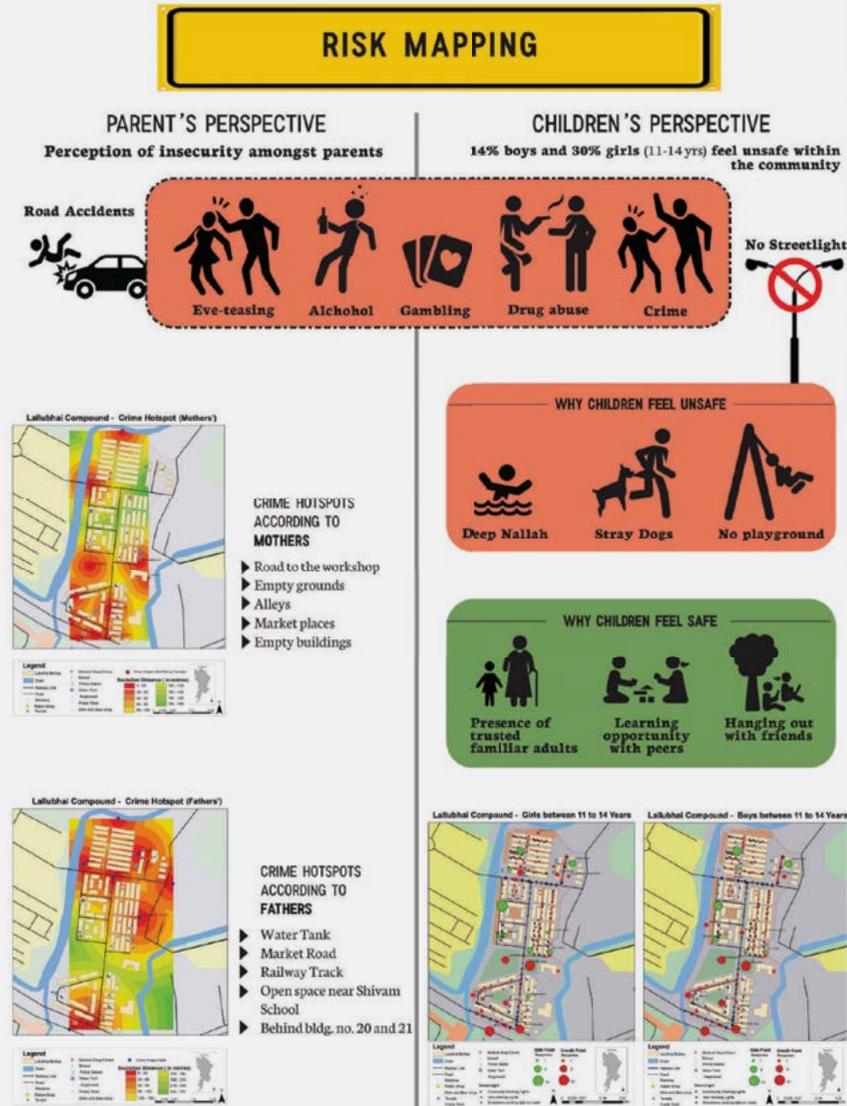


Image source: Action for Children's Environments (ACE) Trust



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

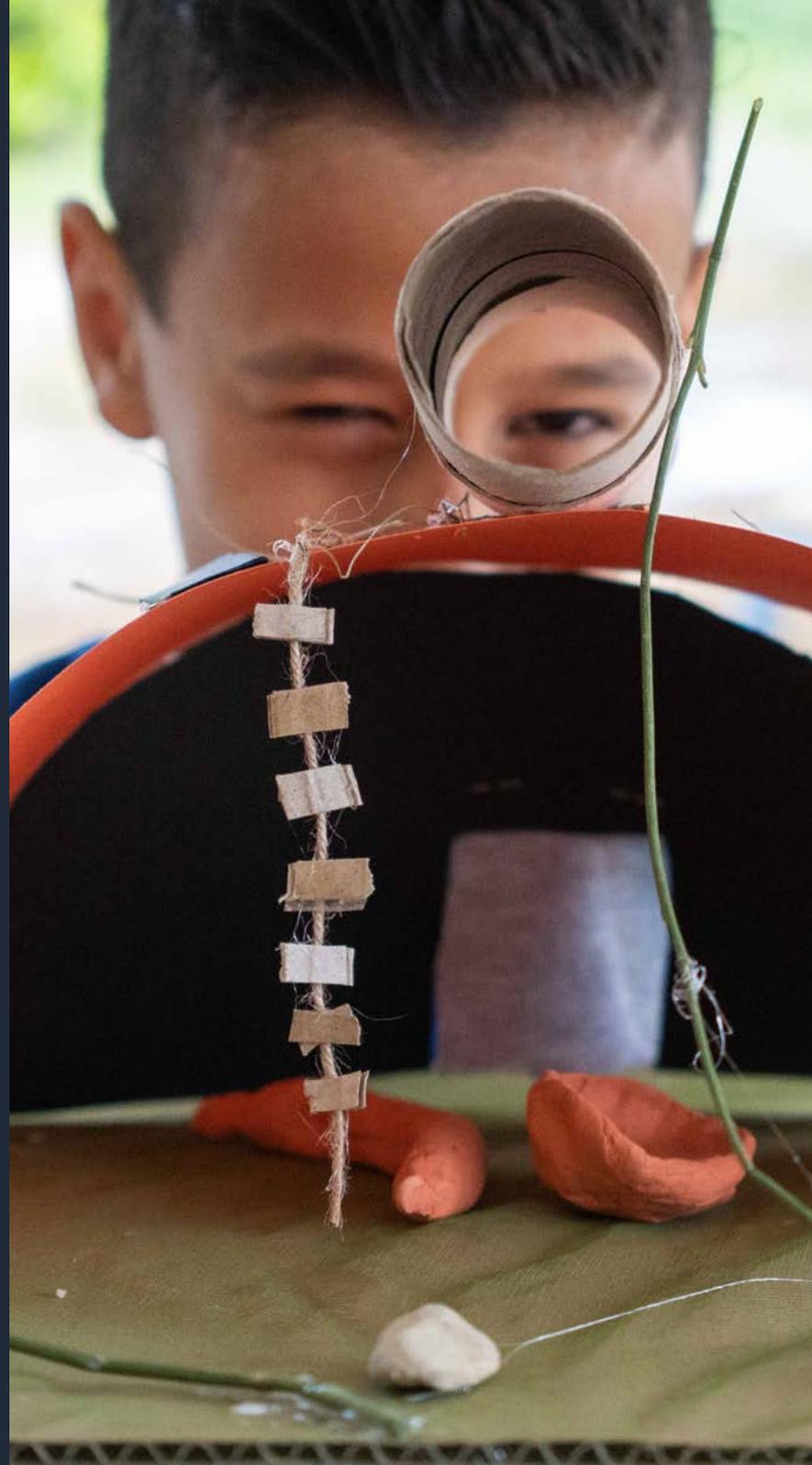
1. Generating an idea
 2. Building partnerships
 3. Funding
 - 4. Researching local context and needs**
 5. Translating children's ideas into design solutions
 6. Selecting the intervention location
 7. Choosing materials, skills and technologies
 8. Technical design
- B** Procurement and building
- C** Post building, impact, and sustainability



Step 5 Translating children's ideas into design solutions

Key points:

- Children must be at the centre of the co-design process.
- The process of designing spaces with children requires careful planning and the preparation of tools appropriate to the context and the participants.
- Children should be engaged through play, ensuring activities are fun and enjoyable for them.
- The process must equip children with the knowledge needed to fully participate.
- Good facilitation is key for successful participatory engagement.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Design should deliver solutions that address the needs of children and other residents. At this point in the process, it is likely that the main function(s) of the built intervention has already been identified, for example: school, playground, public space, sports centre, nursery, multi-use children's centre, etc. In order to move towards co-designing the intervention, practitioners should work closely with children, youths and adults within the local communities who will be using the space. Context specific analysis and a high level of participation are key components of sustainable, practical and innovative solutions. These can then be realised through the combined expertise of designers and users.

As discussed in the [Key Concepts section](#), play is fundamental to children's development and wellbeing. This means that play should be the main approach to children's engagement throughout all phases of the co-design process, ensuring that children participate in a positive, fun experience.

5.1 - Preparation

Taking the time to prepare participatory activities can address some of the key challenges posed by the process. The preparation includes choosing the tools, facilitators spending time to develop trusting relationships with the children, understanding the children's diversity, and developing activities accordingly. This keeps in mind that children's experiences and responses to displacement may differ.

Both children's and their caregivers' routines and responsibilities should be taken into consideration when planning the timing of activities. For example, some groups may not be able to participate on some days or at certain times because of schooling, work, childcare responsibilities or religious practices. Likewise, if the activity is aimed at observing participants' use of a space, then public holidays or the time of day may affect outcomes.

During the preparation, ensure that the time allocated for activities is not too tight, but rather allows for flexibility and the incorporation of unstructured play, as this might result in unexpected valuable inputs. Preparing a box with various tools with which to engage children can help with this: stickers, puppets, building blocks, soft balls, etc.

To organise community meetings, coordination with local partners and stakeholders is essential for ensuring inclusivity and transparent communication. Taking the time to prepare for community activities is crucial. This includes deciding on the:

- number of participants, e.g. small or big groups;
- profile of participants, e.g. age, gender, nationality, race/ethnicity, etc. (ensuring fair representation);
- outreach strategy, e.g. door to door, through existing database, etc;
- location of activity;
- timeline;
- selection of facilitators; and
- tools to be used based on the objectives of the intervention and participants.

Choosing where to conduct participatory design activities with children is very important for ensuring that children feel comfortable to speak and share their opinions. The location should be familiar, accessible, child-friendly, safe, welcoming, and with available amenities (water, bathroom). Examples include their classroom, their school's courtyard, a social club, public space, community centre and, when possible, on the site of the intervention. Children's safety is of the utmost importance, and someone known by the children should be part of the process.

To ensure the safety of children in the activities that involve them being on site, children should be equipped with hi-vis gear, and the facilitator should conduct an induction session beforehand, including information about the code of conduct whilst on site.



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5. **Translating children's ideas into design solutions**

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

CHILDREN'S INFORMED CONSENT AND ASSENT

Ethical protocols and processes should be established. Informed consent and assent should be obtained from both caregivers and children, by presenting the aims of the intervention and what is expected of the children, using age-appropriate means. As in many contexts, children are not legally able to give true informed consent until age 18, instead they are asked for their assent. Gaining children's assent, where they agree to participate, is an important process. Relevant and voluntary child participation, as well as transparency, honesty, and accountability are paramount. Establishing an ongoing assent process with children creates a safe space for them to participate.

A simple way to achieve this is for children to practice the sentence: 'No! I don't feel comfortable with...' at the beginning of each session, and to encourage them to use it whenever they do not want to participate or discuss a specific topic. Young children want to please adults or are accustomed to domestic and educational contexts where they have to obey, and thus they may do what they are asked even if they do not want to. Therefore, getting them used to saying 'no' when they do not want to do something is very important.

Another effective and inclusive way of gaining ongoing assent is through the use of gestures or artifacts. For example, children may be asked to make a 'thumbs up' sign whenever they would like to take part in a stage of the intervention, or a 'thumbs down' sign whenever they would not. This encourages children who might not be comfortable speaking up to express their ongoing assent. It is important that facilitators remain sensitive to children's non-verbal communication and use their own judgement. Children might not explicitly voice dissent, but might express it through facial expressions, lack of attention, and gaze. Children should also be reminded that they can withdraw at any point if they wish so.



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- 1 Introduction
- 2 Key concepts
- 3 Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

5.2 - Adapting tools to the context and participants

The choice of tools for co-design varies depending on the children's age group, gender, social class, cultural and educational background, abilities, and geographical location among other factors. Children's cultures, experiences and environments shape their capabilities, and so it is important to use tools and materials that they are familiar with. Regardless of age, some children may not be literate or familiar with certain technologies. Child development does not necessarily follow a linear path and may not unfold in the same ways across diverse cultures or in different parts of the world. Some research methods may also be more appropriate for children of certain ages than for others.

It is important to adapt the tools in order to engage equally all children, including children with disabilities. For example, working with children with visual impairments often means radically adapting existing tools so that visual skills are not part of the activities (e.g. instead utilising verbal communication, sounds, music, touch).

Most tools proposed in this handbook, unless specifically stated, are recommended to be used with children aged four years and above, but they can be adapted to incorporate younger children and children with diverse capabilities. The activities must be based on play and be fun and enjoyable for the children. The facilitators should also enjoy the sessions and make it clear that there are no right or wrong answers, but that all opinions are respected.

One factor to consider when planning participatory activities with displaced children is that some may be particularly distressed about the loss of the roles they used to have in their home countries. Such roles may have once allowed them to meaningfully contribute to their community's social and economic life. These roles may have allowed children to learn and develop important life skills, and were fundamental for their social integration and self-esteem. Having lost these opportunities following displacement, children may consequently not value the importance of play and education in their development and wellbeing. Integrating similar roles and skills into participatory design activities may prove useful and be welcomed. Some international organisations (such as War Child Holland) have developed methods for community engagement that are adapted to the local context by each country's office. This is important as the context of a particular place greatly impacts the way the processes should be carried out on the ground.



WARM-UP AND WIND-DOWN



Photo courtesy of CatalyticAction

Warm-up and wind-down sessions help to achieve better focus and performance throughout the participatory activities. A warm-up session is a short introductory time during which children are introduced to one another and the facilitator through a fun activity. It is also an opportunity to introduce children to the idea of participatory design, cooperation, and arriving at shared thoughts. The warm-up allows a smooth transition into the core activity by focussing everyone on the present, and by relieving any stress or tension which displaced children may feel. A wind-down session is the concluding time during which the children together with the facilitator end the activity and reflect on what the session meant to them.

 [Click here](#) to download four templates for warm-up and wind-down activities.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

5.3 - Who conducts the activities?

Selecting facilitators together with local partners is a key step in preparing the activities. The facilitators of the participatory activities play an important role in working directly with the children, and they can enhance the participatory process and its success. They must possess knowledge and experience of working with children, especially the most vulnerable, using participatory tools. Facilitators should have an understanding of children's diverse experiences before and after forced displacement, their local context and the children's roles. They should have completed adequate training, received support to ensure effective child participation, and passed appropriate checks as per local regulations (for example: Disclosure and Barring Service check in the UK).

Good facilitation is key to ensuring the success of children-inclusive design processes, and the facilitators should have specific characteristics to ensure that the children feel safe, comfortable, respected and listened to throughout the process. Each facilitator should:

- be a good communicator and listener, while being attentive to children's non-verbal cues;
- have a positive attitude;
- be respectful, doesn't belittle but treats children's voices as equal to adults';
- be kind;
- be caring;
- be sensible;
- be flexible;
- be patient;
- be curious;
- be honest and authentic;
- be non-judgemental;
- enjoy working with children and show interest in what they have to say;
- be able to manage the group and ensure that all children's voices are heard;
- speak the same language as the participants.

Having a facilitator whom the children already know and trust, for example their teacher, can help them to feel comfortable. An external facilitator, on the other hand, can bring new approaches that make the experience exciting. Collaborations between teachers and external facilitators are encouraged as they expand the process and methodologies of both practitioners. For example, the external facilitator will gain an inside understanding of



PLAY LAB

Cox's Bazar, Bangladesh,
2017 - Ongoing



Photo courtesy of BRAC

Led by BRAC, the Play Lab project offers children in poor and displaced communities access to play activities, essential for their development. The Play Labs in Bangladesh are established in the world's largest refugee camp, home to over 900,000 Rohingya refugees. Each Play Lab has two leaders, one is Rohingya, and one comes from the Bangladeshi host community. The facilitators receive intensive training where they learn how to communicate and play with children, along with relevant child development and brain science. They are also trained as counsellors to better support the children and identify signs of psychosocial issues.

The Play Labs are culturally sensitive. Their curriculum has been adapted to the context, for example, songs are converted to call-and-response rhymes that are more in line with the Rohingya culture.

The adolescent girls club has also been reformatted for the Muslim culture of the Rohingya. Since the girls of the camp must stay home when they get their period, the facilitators moved the club to their homes where they discuss issues including mental health and menstrual hygiene.



- 1 Introduction
- 2 Key concepts
- 3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5 Translating children's ideas into design solutions

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

socio-cultural nuances within the classroom, which can enrich the research and design process; whereas teachers will gain knowledge of the participatory process and may adopt the approach in future activities. Involving the children's caregivers as facilitators can extend similar benefits to the community. However, there may be situations where children's participation could be limited by the presence of their caregivers.

Children can experience highly distressing events before, during and after forced displacement, and these may have long-lasting effects. Such events may result in physical disability or the deterioration of physical health, cultural and social loss, or psychological suffering such as post-traumatic stress disorder, depression and anxiety. When working with children under extreme conditions, involving a social worker or child psychologist can provide additional support for the facilitator, who may lack this specialised experience. See Plan International's manual [Supporting children who have gone through difficult experiences](#) for more guidance.





LAUGHTER TO LEBANON
Lebanon, 2018 - Ongoing





Photo courtesy of The Flying Seagull Project

The Laughter to Lebanon initiative is run by The Flying Seagull Project team, a group of actors, artists and musicians that organise workshops and shows designed to aid childhood development, improve emotional wellbeing and to give support through laughter.

In Lebanon, they performed shows in informal refugee settlements where the most disadvantaged and marginalised groups live. They also provided workshops to teach their circus and entertainment skills.

The facilitators are professional clowns that approach children and their communities in a unique way, where performance becomes a form of participation. Clowns put children at the centre of their shows, while being sensitive to the context. They understand that the performance can be more powerful than the experience of trauma, if done in the correct way.

The unique and, somehow supernatural, clown characters allow the team to address and challenge unjust social constructs, which translates into performances where all member of society feel comfortable in participating equally.

- 1 Introduction
 - 2 Key concepts
 - 3 **Hands on**
 - A **Designing with children**
- Steps:
1. Generating an idea
 2. Building partnerships
 3. Funding
 4. Researching local context and needs
 5. **Translating children's ideas into design solutions**
 6. Selecting the intervention location
 7. Choosing materials, skills and technologies
 8. Technical design
 - B Procurement and building
 - C Post building, impact, and sustainability

5.4 - Coming up with design solutions

At this stage of the participatory design process, the community is engaged with the production of spatial solutions. Three interconnected types of activity can be conducted with children:

- Visioning exercises;
- Inspiration and design thinking;
- Spatial design exercises.

These phases can also be conducted with partners, as well as youths and adults in the community. Engaging children through play is fundamental in all these activities.

Visioning exercises

Conducting visioning exercises with displaced children can be challenging, as some children may have witnessed traumatic events that have changed their attitude towards life and their future, making it hard for them to express what is asked of them. The process of imagination links to memories and therefore it can be shaped by the traumatic experiences.

Visioning exercises enable participants to imagine desired scenarios that enhance children's wellbeing in urban contexts. Producing a vision of the future enables participants to recognise that they can shape their futures. The activities may begin with children developing individual visions, which are then discussed within the group to collectively arrive at one shared vision. Visioning outputs adds information that moulds the design of the space, such as its spatial experience, uses and users, the elements that form the space, and its colours.

The facilitator can guide participants' visioning without imposing what to imagine through simple prompts, such as: What do you see when you think of this? Where are you? How did you access the space? What activities are you doing? Are you alone? If not, who is with you? What is the weather like? What is around you? What do you hear? Smell? Touch? Feel? etc.

Using artwork – drawing, music, dancing, singing, acting – to express their imaginations allows children to communicate ideas that may be difficult to express in words.

From individual visions to a shared collective vision, tool example:

11

THE RACE

Suggested age: 4+



After each participant has developed their individual vision, they get the chance to share it with the group. With the help of the facilitator, the participants discuss and prioritise the most important elements of their visions to address their needs and enhance their wellbeing. When moving from discussion to prioritisation, participants negotiate with one another and learn about the importance of collective decision making.

The race is a fun exercise whereby children compete to have their most valuable elements from their individual visions win and be included in the collective group vision.

[Click here](#) to download the template for this tool.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



Examples of individual visioning tools:



VISIONING PLAY

Suggested age: 4+



Photo courtesy of CatalyticAction

'Visioning Play' is an activity that uses participants' memories of play spaces to create visions of their desired future playground, expressed through art making. Children affected by displacement might not have had opportunities to enjoy play spaces, or might have experienced traumatic events involving friends, family or the spaces in which they used to play. The facilitators should be sensitive to children's individual situations and, as with all other tools, should respect children's decisions around whether or not to participate. A guided visualisation led by the facilitator can engage participants' imaginations as they navigate memories, in order to dream and reach new ideas.

For example, Visioning play was used in a playground project (CatalyticAction) to express visions of play and play environments among child participants. The picture below shows a child's collage that includes the most important elements for her ideal play space: greenery and flowers, her friends, a fence (to feel safe) and a swing set for her younger siblings.

 [Click here](#) to download the template for this tool.



POETRY AND CREATIVE WRITING

Suggested age: 5+



Photo courtesy of Studio Chahar

Poetry and creative writing are tools that have positive effects on emotional wellbeing, particularly for children who are living in stressful environments. They allow children to revisit their relationships with words and concepts, thus making new meanings out of the things most important to them. Using poetry and creative writing together can complement artwork such as drawing, and enrich children's abilities to express their visions of a space.

For example, in  **'Color my home'** design workshops, Studio Chahar worked with recent migrant children to re-imagine the architecture they have lived in and left behind, and to build collages of what they recall. The participants wrote poems about their homes and transformed their memories into tangible collages. The visuals and poetry helped children share experiences that might have been difficult to express otherwise.



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5. **Translating children's ideas into design solutions**

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Inspiration and design thinking

Explaining to children and others what design is, and how the choice of design solution can impact people differently, is an important step. This can be achieved by discussing with participants case study examples from around the world. This will enable children to think about spatial design as a decision-making process that can change according to their needs. It may inspire them to think about how their environments can change. The case studies should present examples and concepts that are relevant to the intervention, and that can introduce values and ideas essential for good spatial design for children.

As we are working within the complex context of displacement, how to bring children's identities to the space must be considered. Some other characteristics that could be embedded into children's spaces include: personalised and expressive elements; nature; sensory stimulus; privacy from adults; safety; freedom; and security. Furthermore, the space must encourage imagination and growth.

During the design phase, the facilitator should discuss the programme and possible spatial configurations in detail with those who will be its main users. They should also research the typology of the building and understand how it can offer flexible spaces that can adapt over time. Looking at examples of similar solutions can help with envisioning alternative uses. Simulation tools are a great way to stimulate design thinking, through playful approaches, free from the pressure of needing to deliver a result to implement.

If the project is to design a school courtyard, for example, the facilitator could collect a range of examples that reflect important design values, showing pictures and explaining the key impacts of the courtyard designs. These examples should include both negative and positive elements and impact for the children. Children can then discuss what they like and dislike about each example, what would be good for their school courtyard, how the teachers might feel about it, whether boys and girls would use the same space, and so on.



BEFORE AND AFTER

Suggested age: 4+



Photo courtesy of CatalyticAction

Showing children a space before and after an intervention enables them to discuss its impact and to highlight what they like and dislike.

For example, children are shown pictures of schools/streets/other environments with and without artistic touches and are asked to compare them. What do they notice? What feelings does each space evoke? Which environment would they prefer to be in, and how would it affect their wellbeing? The discussion includes the importance of art, with an emphasis on the capability of anyone to produce art. From the discussion, children learn and gain the confidence to design their own spaces.

As shown in the pictures above, CatalyticAction used 'Before and after' photos to discuss with children how art interventions, such as murals added to a building, can change the perceptions and feeling of a street.

 [Click here](#) to download the template for this tool.



- 1 Introduction
- 2 Key concepts
- 3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5 Translating children's ideas into design solutions

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Spatial design exercises

Spatial design exercises enable designing solutions for the intervention site to help achieve the participants' vision. Designing solutions involves deciding on the spatial components, uses of space, spatial configurations, materials, colours, circulation and spatial experiences.

Activities should be conducted on site, as this helps participants to develop an understanding of the space, which is key for them in visualising their ideas for the intervention. Whenever it is not possible to conduct activities on site, the built environment professional should take photographs and prepare a sketch or 3D visualisation for participants to use when co-designing. In spatial design exercises, using artwork such as drawing, painting, model making, performance and collage, allows children to visualise their ideas in ways they are familiar with, making it easier for them to express themselves. Depending on the age group of children, these exercises can achieve different levels of detail.

Children develop a sense of control when they can manipulate 3D models and change spaces that are usually fixed. 3D modelling is useful for experimenting with spatial design. Several mediums can be used, including building blocks, plasticine, cardboard boxes and recyclables. 3D modelling is especially interesting as it can happen at different scales. The one-to-one (human) scale can be used to test and discuss some of the design choices, such as the height of a chair.



CONSTRUCTION BRICKS

Suggested age: 4+

Construction bricks, such as Lego, is a low-tech tool that represents a common ground for children of different ages, and between adults and children. All can equally use the bricks to construct 3D models of an intervention. The facilitator could create the base model of the intervention site. The different colours, shapes and objects unleash the creativity of children to physically design their intervention.

See how the Design Club used Lego to design a tomato greenhouse with children [here](#).



LET'S BE ARCHITECTS

Suggested age: 10+



Photo courtesy of CatalyticAction



Let's Be Architects invites children to play the role of architects. Through drawing and/or manipulating 3D models, children explore different configurations of spatial designs, which helps reveal visions and stimulates creativity. Children learn how architects visualise design solutions, discuss the architect's role and become architects themselves by drawing and creating their own interventions based on their needs and aspirations. This exercise is most effective with a group of children aged 10+ and can also be conducted with youths and adults.

[Click here](#) to download the template for this tool.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Using digital gaming for spatial design empowers children. Many children of different educational backgrounds play video games. Even in the most difficult settings, parents tend to have smartphones that children can use. Even when children do not play video games, they are attracted to these tools. Digital gaming is a tool of communication that children are usually experts in, reversing the power relations between children and adults.



BLOCK BY BLOCK

Suggested age: 4+



Photo courtesy of UN-Habitat

The video game Minecraft allows players to build structures out of textured cubes (like digital Lego). UN-Habitat developed this idea, creating **Block By Block** with the makers of Minecraft (Mojang), to involve youths and different community groups in the design of public spaces. Participants communicate their proposed designs using 3D models which improves their level of understanding and engagement.

See UN Habitat's report **Using minecraft for youth participation in urban design and governance** to learn more about this tool.



YARD

Suggested age: 4+



Photo courtesy of Jack Campbell Clause from KDI

Developed in 2019 by Arup's Advanced Digital Engineering team, YARD is a tool for engaging with communities to design and validate public space interventions. It provides a new way to engage the public in co-creating better places through augmented reality (AR). YARD lets users choose and place objects into real space, building virtual scenes to plan and test design interventions that improve the quality of the public domain.

To learn more about this tool, see **Arup's report**, which focuses on the testing of this tool in three vulnerable urban settings in Tripoli (Lebanon), Nairobi (Kenya) and Azraq (Jordan).



- 1 Introduction
- 2 Key concepts
- 3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability



SCHOOL GARDENS

Milan, Italy, 2012 / 2014



Photo courtesy of ABCittà

This project is a collaboration between several organisations including Legambiente, ABCittà, the municipality of Milan, Amici del Parco Trotter and Zone 2 Milan. The goal is to requalify nine school gardens in the city of Milan through a participatory process.

The pupils participated in workshop activities where they made drawings and scale models to express their needs and desires for their school gardens. The children worked with architects and engineers to better understand the limits and the feasibility of the project.

The project offers a method for improving the green spaces of the city, and of promoting a sense of belonging in children and young people. The co-design, workshop and animation activities carried out during the implementation phase represent a first step towards the activation of these spaces.

Elements of play and fun in spatial design exercises are crucial for children not to feel pressured to deliver a 'perfect', 'final' or 'common' product. Engaging caregivers together with their children informs design and enables the children to be heard by adults.

The participation of infants and toddlers becomes crucial for an inclusive process, especially when developing a built intervention for these age groups. Engaging caregivers and toddlers together in design exercises allows an understanding of how infants, who are usually accompanied by their caregivers, interact with and use the space. Additionally, observing young children and their caregivers may provide a clearer understanding of how to better design the intervention.

The following tools can be used for the participatory spatial design exercises.



COMBINE AND FANTASIZE

Suggested age: 4+

'Combine and fantasize' originates from the 'Co-design with kids' toolkit (TU Delft, 2018). It is a game during which participants and the design team create imaginary situations by combining an 'object' and a 'property', and then discussing what could happen in each situation. 'Objects' in the game are chosen from the physical space of the design. 'With this game, design teams create unusual situations. Those situations stimulate their imagination. This promotes creativity in coming up with solutions for the existing situation. The more ideas and the crazier, the more chance of special and new solutions.'



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5. **Translating children's ideas into design solutions**

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

PUBLIC DESIGN CONSULTATIONS

All ages



Photo courtesy of IOCC

Public design consultations can take place outside or in any public venue known to the local community. They reach greater numbers of community members, to hear about their needs and suggestions. Children are encouraged to participate in public design consultations, but there is a risk that the other participants (youths or adults) can limit their participation. For that reason it is important to engage children in structured activities during the consultation. For example, one facilitator could provide children’s engagement specifically, using playful tools.

Public consultations can be used to design solutions and to validate them, hence they can happen at different stages of the process. For example, to design a street intervention the design consultation could use photographs and 3D visualisations alongside examples of other street interventions. Participants are asked by the facilitator to choose which examples could work and where they would place them on the map.

To validate the design of a street intervention, the consultation could use photographs and 3D visualisations of the preliminary design. The facilitators ask participants to provide feedback and comments on the design presented.

Throughout these participatory activities, facilitators can mediate between the child and adult participants, and other key actors, such as local government. This can be achieved by inviting municipal staff or elected officials to join public design consultations. If needed, facilitators can reach out to local government and consult directly by creating a tailored design consultation.

After conducting a number of participatory design activities, the facilitators analyse the results to develop the preliminary design. Ideally, the activities will have already identified clear design solutions for the designers to organise into a visual representation for the design consultation. This may be a good time to conduct a technical survey of the site, to ensure that the suggested design solutions can be accommodated in the available space.

When children’s input cannot be easily implemented, their contribution can be included in creative ways. For example, if children proposed building a spaceship, the design could use outer space as a theme, perhaps designing a spaceship-shaped playground. At the same time, being transparent with children about the restrictions for the intervention can help them to suggest ideas that are feasible. When participants know what the limits are, they are more likely to make practical decisions about how to use available resources, and to be willing to compromise on what is less important.

Transparently communicating budget restrictions to children when engaging them in co-design activities is mentioned in the report [‘Making space for children: Planning for post-disaster reconstruction with children and their families’](#) by Save the Children.

The preliminary design is presented back to the community for another round of feedback, using clear visualisations such as 3D drawings, digital and/or physical models. This validation session can happen as a public design consultation, or in a workshop setting with children and their caregivers. If not already directly involved, engaging local authorities in the validation of the preliminary design is a fundamental step in ensuring their support, and later securing building permits.

The further feedback gained contributes to finalising the preliminary design, and the move to technical design.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5. Translating children’s ideas into design solutions

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability



KIDS IN NATURE

Rajasthan, India, Ongoing

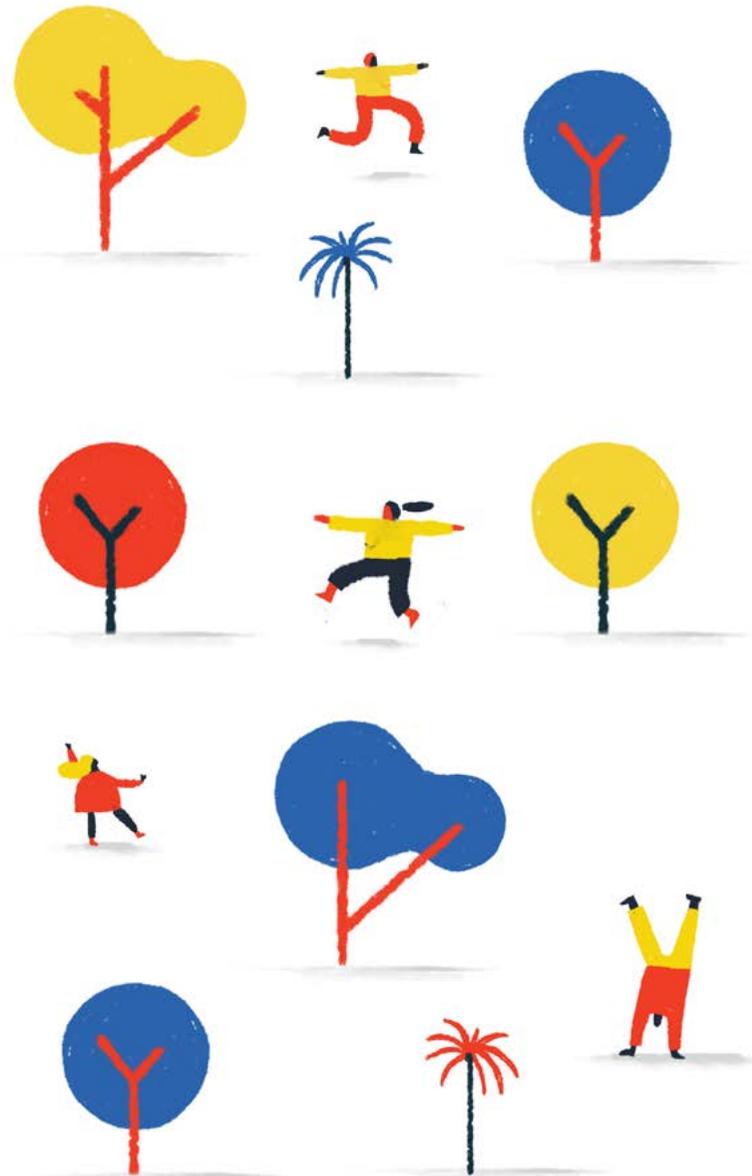


Photo courtesy of ACE Trust

The Hope Project in India is creating a nature retreat in Ranthambore, a town in Rajasthan that is easily accessible from New Delhi, for the children living in inner city informal settlements. This will be a place where poor urban children can get away from the city and discover themselves and the world around them in a secure natural environment. The project site is close to a famous tiger sanctuary, and the town is known for its scenic beauty.

This project was co-designed with adolescent Muslim girls from The Hope Project school in Nizamuddin Basti, an inner-city, Muslim majority, informal settlement in central New Delhi. The girls have little permission to venture outside their community. The annual Kid's in Nature camp, organized by the trust running their school, is one of the few vehicles for them to connect with the world outside their settlement. The charity decided, in consultation with the community, to build a permanent facility for this activity.

The girls and teachers accompanying them to the camps worked with architects from the ACE Trust to co-design the new permanent facility. The girls participated in various visioning workshops and worked with simulation tools to design the nature retreat. The students of the Hope Project school are now working with landscape architects to plant the multiple gardens and create natural wooded areas at the site.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location
7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability



Step 6 Selecting the intervention location

Key point:

- A careful and participatory selection of sites for interventions is essential for ensuring their positive impacts on children and long-term sustainability.



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1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

The best location for a built intervention can be identified via any of the following steps:

- **Partnership establishment**

Actors may initiate a partnership having already identified a site for the intervention. Nevertheless, the location should always be analysed and discussed during the participatory design phase. Feedback on the chosen location from the local community should be discussed with partners.

- **Context analysis**

The site location could be identified as partners learn about the area and available sites for the intervention. If the site has already been identified, more information about the location can be collected during the context analysis. For example, understanding access to the site, mapping existing activities, etc.

- **Designing spaces with children**

Designing spaces with children can also lead to site selection. A project might aim at implementing an intervention within a neighbourhood, but the site selection itself may be left to the participants of the co-design process to decide. Identifying the site during this phase is ideal, because residents can provide information on locations not known to the partners or found during the context analysis. For example, it is important to understand the hidden and overlapping layers of governance in specific places. The municipality is often the legal entity that provides building permits, but there may be powerful local families, or informal groups, who also need to permit work in a specific location.

Some organisations have checklists that they follow to guarantee that the potential intervention site is adequate. This is often found in organisations working with child protection, whenever new spaces for children's activities are set up.

For example UNICEF's  ['A Practical Guide to Develop Child Friendly Spaces'](#) (page 54) indicates the following considerations for site selection:

- Are there hazardous materials and toxic substances in the space/area?
- Is there good air quality?
- Is the space safe from natural hazards, such as flood zones, landslide zones?
- Is the space safe from armed conflict? Risks of exploitation?

- Is the space accessible to children and their families?
- Can the actual space be easily secured (i.e. with a fence or a barrier) from dangers (i.e. strangers)?
- Is there water and latrine access?
- Is the location convenient and accessible for other service providers and NGOs who will be participating in the activities?
- Is the size sufficient for the number of expected beneficiaries?
- Has the community agreed to the CFS and the selected location?
- Has the space been allocated for other functions? (if so, consider the implications on schedules, use of space, etc.)
- Is there an agreement to use the space with the owner/proprietor?

Other factors for assessing the intervention's location can include:

- **Accessibility**

For all users, including those in wheelchairs.

- **Child safety features**

For example, is the space well protected from traffic?

- **Security**

Is the location safe from potential vandalism and improper use?

- **Perception of the space**

What is the local residents' perception of the location? Perception can be linked to the location's history. For example, a location that once was used for drug dealing might still be perceived as an unsafe location. It may still be possible to work in this location, but it would require a participatory process with the communities to work on changing their perceptions.

- **Power dynamics linked to the location**

Is there anyone controlling the space? How? Would this pose an issue for the planned intervention? For example, there could be a person or a family controlling a public park (informally) who charge people money for its use. If the intervention falls within the park, there is a high risk that users will still be charged money to access the space.

- **Legal ownership of the space**

Who owns the space? How will the ownership be managed within the project? Will the space/land be purchased or rented? If rented, for how long and under what conditions? What will happen to the space if in the future there is no budget to pay the rent?



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability

• Permits

What permits are required to implement the built intervention? Permits include the official legal documents required by law, and also informal approvals from relevant authorities.

• Spatial qualities

Are the spatial features (e.g. size) adequate for the planned intervention?

• Environmental factors

Based on the planned intervention's purpose, are features such as natural light, ventilation and greenery sufficient?

• Rough budget assessment

Can the intervention be implemented within the available budget?

For example, if the site requires major groundworks this could use up substantial resources. A location where the existing ground is already suitable for the type of intervention planned could save much expense.

• Future projection

This is particularly valuable when planning a temporary structure for displaced populations. What will happen to the space when the displaced population returns home?

A wrongly selected intervention site might result in compromising the use of the built intervention. For example, a municipality may give permission to an NGO to use specific public land for a public space intervention. During the participatory activities, the NGO learns that the site is not favoured by residents, nevertheless the NGO does not change the location. This may result in the built intervention being underused, and possibly vandalism.

Effective built interventions can enhance existing spaces and practices, such as those that incentivise a new use of a space, or make spaces safer. If a square near a trafficked road is already used by people to socialise and by children to play, a relatively small intervention to separate the pedestrian area from the motorised traffic can make these activities safer for everyone, increasing people's use of the square.



CREZCO CON MI BARRIO
Bogotá, Colombia, 2017



Photo courtesy of Fundación Casa de la Infancia

Crezco con mi barrio (I grow with my neighbourhood), the children's priority zone pilot project, is a programme supported by the Bernard van Leer Foundation and implemented in Ciudad Bolívar, a semi-informal urban area of Bogotá which lacks public spaces and road safety.

With the support of the local organization Casa de la Infancia, the residents have been involved in a community engagement process with the aim of reclaiming public spaces for families. Several interventions, such as play-streets programming, pop-up parks, and painted walking routes to improve safety on school commutes, have been developed to enhance child development outcomes.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies
8. Technical design

B Procurement and building

C Post building, impact, and sustainability



Step 7 Choosing materials, skills and technologies

Key points:

- The choice of materials and technologies can generate positive impact and empower the local community.
- Purchasing materials locally, hiring local labour and adopting context appropriate technologies can contribute to boosting the local economy and improving social cohesion.
- The choice of materials and technologies will have an impact on the environment and the health of workers.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Building materials tend to utilise a large part of the budget for built interventions. Paying particular attention to the choice of materials during the design process can maximise the positive impact generated.

In most design processes, material choices are guided by:

- Aesthetics;
- Functionality; and
- Affordability.

When working with vulnerable communities in a context of displacement, other aspects should also be considered when choosing the materials. These vary depending on the intervention itself, and the values of the implementing organisation or designer. Below are some examples.

Local materials, skills, technologies

Guiding questions:

- Is the selected material available locally?
- Is there local labour with the experience and skills to work with this material?
- What is the level of expertise available for working with this material? (e.g. high level = complex techniques available for processing the material)
- What cultural meanings are attached to particular materials/construction techniques by displaced and host communities?

Choosing a local material provides income for local businesses, which can generate multiple benefits:

• Boosting the local economy

In contexts of displacement, built interventions are often located in vulnerable areas where businesses would benefit from the additional income that a built intervention generates. Importing building materials from abroad or from other locations would be a missed opportunity to help local businesses thrive.

• Improving social cohesion

This is particularly pertinent when there are existing tensions between the community for whom the built intervention is implemented, and other local communities (e.g. between refugees and host communities; more established refugees and the newly arrived; newly arrived refugees of different nationalities). Purchasing from local businesses can provide tangible proof of positive impact, even if the built intervention will then be used by another community.

• Allowing easy and sustainable maintenance

Are materials and skills for maintenance available within a short distance of the intervention site?

The designer might be able to suggest innovative ways of using or processing a material which offers additional benefits, this could include upcycling wasted materials. Delivering context-specific innovations that can be replicated by the community without external input contributes to building local capacity. The intervention itself could centre around a technology to process, assemble, or install a material, and can have benefits in terms of health, the environment, durability, costs, etc.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea

2. Building partnerships

3. Funding

4. Researching local context and needs

5. Translating children's ideas into design solutions

6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Context-specific innovations that can be replicated by the community without external input contributes to building local capacity



SAFE SPACE FOR WOMEN AND GIRLS

Teknaf, Bangladesh, 2019



Photo courtesy of Rizvi Hassan

Safe Space for Women and Girls was built to allow Rohingya refugee females to advocate for basic services. It is a space where they can freely and safely discuss abuse and violence, and a place where they can learn to create and share.

Bangladeshi architect Rizvi Hassan collaborated with Bangladesh-based NGO BRAC and UNICEF to design and build this project. As an initiative led by local organisations, the project aims to provide a positive example of how by being good hosts, and by sharing ethical ideologies, conflicts can be prevented.

The project was built using local materials (untreated bamboo for the structure and straw/hay with tarpaulin for roofing) and by hiring local labour from the refugee camp where it is located. The site is within a cyclone-prone area, so the design avoided materials that could be hazardous during high winds. As the building is located near an Asian elephant habitat, its exterior walls avoid visually disturbing elephants. Material choices were also made in line with the temporary nature of the refugee camp.

The project engaged the community during its design and construction process. This had multiple positive impacts and, in particular, men who participated in the construction were eager to get their family members (wives, daughters, mothers, sisters) involved with its activities. This was seen by the project partners as a major achievement, as many existing centres had reported that men were unwilling to see their family members attend.



IBTASEM PLAYGROUND

Bar Elias, Lebanon, 2015



Photo courtesy of CatalyticAction

This project comprises a playground design that built the capacity of local providers to use a new construction technique using existing local materials. It consists of a wooden, modular, structure that is assembled on site. CatalyticAction worked with Arup Italia engineers to design elements such as joist hangers and footings that could be fabricated with locally available materials and skills.

Joist hangers are widely used to join timber elements together, and are usually made from steel or aluminium. Through this project, the local welder learned to make these and provided the needed elements. This added to their skills which may result in additional income and an improved livelihood.

The footing element was designed to remove the need for diagonal bracing in the structure, which would have compromised the circulation around and across the playground structure, making the play experience less dynamic. It further allowed the timber pillars to be lifted from the ground to avoid water and humidity. The project resulted in a context-specific and innovative design solution.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Empowerment

Choosing building materials carefully can generate opportunities for empowerment within the construction process. Below are two examples of empowerment that can result from a well-considered choice of materials.

• Empowering unskilled labourers

Choosing materials that do not require a high level of specialisation provides opportunities for unskilled labourers to work on the construction, and to acquire new skills from working alongside skilled workers. This can extend to youths who could participate in the construction phase through a structured apprenticeship program.

• Empowering children

Choosing materials that are safe for children to use during the construction phase may allow children to play an active role through structured activities with facilitators. Such engagement would strengthen children's participation within a project and increase their sense of ownership, which contributes to the long-term sustainability of the intervention.

• Empowering women

In some contexts, women may be excluded from the construction process. Choosing appropriate building materials and design components can help to facilitate women's participation, and can generate empowerment by offering livelihood opportunities and challenging notions of this being a male sector.

The same thinking can be applied to other excluded groups that the intervention aims to empower.

Environment

The building materials used in a built intervention have an impact on the environment, both through their production process and their use on site. When working with displaced communities, built interventions may be temporary by design. If this is the case, building materials that can be reused at the end of the life cycle of the building would be preferable.

Another way to reduce the environmental impact of a built intervention is to use recycled materials. This can present good opportunities for upcycling wasted materials, creating inspiring ideas for the local community. Giving a value to waste can also have great economic impact and raise awareness around issues of waste management/recycling.



JARAHIEH SCHOOL
Al Marj, Lebanon, 2016



Photo courtesy of CatalyticAction

The Jarahieh School project provided a good quality educational space for Syrian refugee children in Lebanon, enabling them to be active agents through education. The school was designed and implemented using participatory design practices which engaged the community members and various stakeholders, and allowed them to become part of the process.

Working alongside both Syrian and Lebanese workers for several weeks allowed the CatalyticAction team to build close and trusting relationships. This trust made it easier to introduce alternative building strategies, which may otherwise have been viewed sceptically by locals. For example, the team sourced sheep's wool from local farms to insulate the walls of the school. Lebanese sheep farms very rarely sell wool, with it only used to fill pillows and mattresses. The know-how for using and cleaning this material was already present in the local community, especially among women. CatalyticAction introduced an innovative method of treating the wool so that it could be used as an insulation material.

CatalyticAction chose to use this material for insulation because sheep's wool is completely natural and sustainable. Its use supported local farmers and empowered local women, who became part of the construction process.



- 1 Introduction
- 2 Key concepts
- 3 **Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability



PAPER LOG HOUSE

Kobe, Japan, 1995



Photo courtesy of Takanobu Sakuma

Since the 1994 conflict in Rwanda where Shigeru Ban was a consultant for the United Nations, he has provided humanitarian design as part of relief projects for victims of mass displacement, tsunamis and earthquakes. 'Paper Log Houses' are temporary shelters implemented for the first time after the Kobe earthquake in Japan.

The general construction logic is based on the use of prefabricated, eco-friendly, inexpensive materials which are either locally available or recycled, and which can be dry-assembled without the aid of skilled labour. The units do not impact the soil, are easy to dismantle, and the materials can be disposed of or reused.

The basements of these houses are made from recycled beer crates filled with sandbags. Paper tubes are used as load-bearing elements for the floor, walls and roof, while the floor surface is composed of plywood panels. Waterproof sponge is sandwiched between the paper tubes for insulation, and a tenting material covers the roof structure.

Over time, this configuration was adapted to different contexts in Turkey, India, Philippines, and Ecuador, always following the same principles. The result is a shelter of reasonable quality that respects the environmental context, reduces waste materials and saves resources.



PARTICIPATORY SPATIAL INTERVENTION

Bar Elias, Lebanon, 2018



Photo courtesy of CatalyticAction

This project reduced vulnerabilities and improved the wellbeing of the community in Bar Elias through a co-produced built intervention implemented by local refugees and host community members.

The two main issues identified by the local participants were pollution and the lack of safe spaces for children. The team decided to tackle pollution through awareness raising, while the lack of children's spaces was addressed directly. They introduced playful elements to new benches, pavements, access ramps and shading structures for the area.

To raise awareness about reducing pollution, the team decided to use recycled materials in the different components that formed the intervention. By choosing colourful materials this also addressed the need to provide colours, which is something that the community saw as important for children. The use of recycled materials has an educational function; it concretely shows how to creatively reuse waste materials to address the needs of children and their caregivers.

Discarded tiles were collected from a local factory and recycled to produce educational mosaics that cover the benches. Plastic bottles and containers (water, shampoos, yogurt boxes, etc.) were collected by the local community and transformed into small squares that form colourful shading structures (see picture). Similarly, plastic cups from large yogurt containers, vegetable crates and ice-cream cups were assembled into other shading structures, generating colourful and playful shadows.



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location

7. **Choosing materials, skills and technologies**

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Health

Building materials can often pose health threats to the people handling them. For example, they may be toxic if handled without adequate personal protective equipment (PPE). Therefore, when working in contexts where there is low awareness of the hazards of wrongly handling building materials, it is best to choose materials that do not pose such threats. This is even more important when caregivers and children are involved in construction. Such considerations should extend to three areas linked to materials:

• Sourcing

Considering how the material is sourced implies understanding how it is sourced from nature. This is a lengthy and complex process that can hardly be achieved in its entirety. Locally, this requires an understanding of how the material is stored and handed over to buyers. If those providing a material are currently facing difficulties, it may be better to choose a different material. For example, if the production industry of a certain material is known to exploit workers (unfair pay, unsafe working conditions, job insecurity, excessive working hours), it should be avoided unless the exploitation issue can be addressed.

• Processing

Designers must also consider how they will use the material and the process of transforming the raw material into the final product. What are the hazards that labourers will be exposed to when processing this material? Keeping hazards to a minimum helps to guarantee everyone's wellbeing during the construction process. The Provision of Personal Protective Equipment (PPE) should not be taken for granted (see [step 9.2](#) - Management of building works). PPE can limit hazards, but often training around its proper use must first be conducted. For example, the designer might choose to treat wood with a specific paint for aesthetic reasons. If this paint is toxic and requires specialised PPE that is not easily found locally, it may be best to choose a different paint, as the health risks for handling this material without proper use of PPE are high.



RE:BUILD
Jordan, 2016



Photo courtesy of Pilosio Building Peace

'RE:BUILD' is an innovative construction system designed to provide safe, high-quality structures in refugee camps. Depending on need, each structure can be used, for example, as a house, school, or clinic. Temporary and modular buildings are formed using wall panels made of scaffolding and grids which are filled with gravel, sand or earth. Using only the ground available in the camps, the design team provides insulated interiors at a low cost.

The project puts communities at the centre of the process. RE:BUILD's easy and safe assembly promotes the involvement of refugees in construction. Light components can be assembled on site using only bolts and tools. The wall panels are realised using a dry construction technique for greater safety. No cement or welding machines are involved, thus avoiding processes that produce fine dust which is harmful to the health of workers. With the supervision of a technician, the structure can be assembled in just two weeks by a team of ten workers lacking any know-how.

Another great benefit of the RE:BUILD system is the ability to reuse the materials, which is invaluable in a situation of scarcity, saving materials, time and energy.



- 1 Introduction
- 2 Key concepts
- 3 Hands on**

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location

7 Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

• **Assembling and installation**

Similar to processing a material, it is important to think about how a material will be used to make the components to be installed on site. How will the installation take place? What are the hazards linked to the installation? Is there any way to design a solution to reduce these hazards? For example, steel can be assembled through welding or through bolting. As welding poses more hazards than bolting, designing bolted connections for steel components is safer.

• **Use**

When choosing materials to construct spaces for children, it is important to think about the safety of those materials during use. Are there any hazards for children when they touch exposed materials? For example, is there any paint that is toxic for children? Are there any sharp/rough surfaces that could cause injury? Materials should also be safe long-term with minimal maintenance.

Specific materials, and construction techniques, may have cultural meanings and uses in displaced and host communities. This means that local, familiar materials for the host community may be inappropriate for the displaced people, or that they may be unfamiliar with the construction techniques involved. Moreover, a material which may have good properties in terms of cost, availability and environmental sustainability may be considered to be poor quality, or "backwards". This could affect its use or attitudes towards the intervention.

When selecting building materials, it is important to make informed choices about what aspects to value most when facing time and budget constraints.

One way to address time constraints may be for designers and organisations to build a database of materials and suppliers. This could be compiled and updated across different projects and shared between actors operating in similar contexts. Built environment professionals with experience in interventions can share their knowledge of available materials, sourcing processes and techniques.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location

7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Specific materials, and construction techniques, may have cultural meanings and uses



Step 8 Technical design

Key point:

- The technical design should enable the hiring of local labour and children's participation during the construction phase.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

Technical design is the translation of the final design into construction drawings. This step is usually conducted by an architect or engineer working for the building contractor. However, ideally the architect or engineer is part of the same team that conducted the participatory design activities, as this guarantees continuity between these two design phases, and ensures that no major alterations are made during the technical design process. This can also benefit the timeline, as less negotiation is needed between the final and technical designs.

The construction drawings produced should be clear for the people who will build the intervention. As discussed in [part B](#) - Procurement and building, there are benefits to hiring local labour and prioritising the use of local materials and skills, but this can sometimes result in working with individuals who are not highly skilled in interpreting complex construction drawings. The architect or engineer producing the construction drawings should keep this in mind and discuss with the contractor/labourers the best way to represent the drawings.

The same thinking must be applied when producing construction drawings to be used by children during structured building activities. Drawings will need to be produced that are easy to understand, keeping in mind that spatial understanding varies for different age groups.



CONSTRUCTION DRAWINGS FOR STEEL STRUCTURES

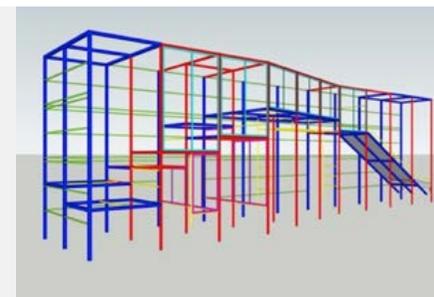


Photo courtesy of CatalyticAction

When working with complex metal structures, understanding the construction can be difficult for welders who mainly work with traditional products. In order to facilitate the reading of construction drawings, it can help to represent the structure as if it were dismantled into several portions. Each face of the structure can be displayed separately using a 2D view and can be prepared off-site by the welder. Rather than adding written notes to the different types of metal profiles, they can be distinguished by using colours to simplify and speed up the assembly process. Once all the portions are completed, a 3D view of the whole structure helps to show how to connect the different pieces.



ROLE OF THE ARCHITECT

Involving architects in the design of built interventions can offer the necessary technical expertise to prevent risks, overcome limitations, and to know how spatial choices impact wellbeing. Spatial choices, such as the size of a room, openings such as doors or windows, the choice and placement of colours, all affect how people feel in a space. They play an important role and can have a direct impact on children's wellbeing. In some cases, spatial choices can offer solutions to the challenges generated by displacement (see [example 19](#)).

Architects with knowledge of, and experience in, designing spaces for children can offer valuable contributions to the whole process. During the participatory design activities, architects may be able to judge if an idea can be implemented or not, and whether it adheres to standards and regulations. This could improve the final outcome and generate valuable knowledge exchange between the architects and other stakeholders involved, such as the local community.

For many organisations this expertise is not present among the staff, but could be added or sourced externally.



1 Introduction

2 Key concepts

3 **Hands on**

A **Designing with children**

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies

8. **Technical design**

B Procurement and building

C Post building, impact, and sustainability



IBTASEM PLAYGROUND

Bar Elias, Lebanon, 2015



Photo courtesy of CatalyticAction

In Lebanon, the United Nations and other humanitarian organisations have delivered some support to Syrian refugees, but the informal settlements within which many live do not provide a vibrant and safe atmosphere for children. The Kayany Foundation and the American University of Beirut have constructed five schools in the region and provided education for the children. Building on their work, CatalyticAction led the process of designing a playground in one of these schools.

Through context analysis and participatory design, it was identified that children would benefit from private spaces where they could play and relax. In the context of Lebanon, refugee children rarely benefit from this type of space as they live in tents, often sharing the same room with many members of the family. It was therefore important to provide this type of space through the playground. Multidisciplinary research (psychology, design, education) also provided insights into how exactly to integrate private spaces into the design of the playground, such as through play houses. Spatial choices, including where to place the play house, how big it should be, what should be inside (colours, furniture, etc.) were all elements that were carefully considered during the design process in order to achieve a sense of privacy. For example, a low ceiling (1 m) and a fairly small size (2 sqm) helped children to feel that the space was meant only for them and not for adults, reinforcing the idea of privacy.



BOUDAY CFS

Bouday, Lebanon, 2018



Photo courtesy of CatalyticAction

The Bouday Child Friendly Space (CFS) is run by the Lebanese Organisation for Studies and Training (LOST) in partnership with War Child Holland. Here they conduct intensive recreation and play activities, awareness raising sessions and structured psychosocial activities for Syrian and Lebanese children, youths and adults.

The main objective of this project was to rehabilitate an existing community building and transform it into an innovative CFS. Before the intervention by CatalyticAction, the indoor space lacked colours and the configuration of the furniture offered a 'traditional' classroom setup – which is usually not ideal for psychosocial support sessions.

The new indoor CFS was designed to be flexible, joyful, functional and stimulating. The design was developed following extensive research on the type of psychosocial activities that can be run in such a space, directly responding to practical needs and suggesting possible ways to optimise existing psychosocial programmes through design. The space was re-organised as one big room where multiple activities could take place. Specific furniture was designed, including flexible tables and seating, to accommodate different age groups and different spatial combinations, with shelves to store the tools needed for exercises. The walls were painted vibrant colours and include some interactive elements, like shapes, a chalkboard wall, and a 'I am as tall as' measuring tape.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

Steps:

1. Generating an idea
2. Building partnerships
3. Funding
4. Researching local context and needs
5. Translating children's ideas into design solutions
6. Selecting the intervention location
7. Choosing materials, skills and technologies

8. Technical design

B Procurement and building

C Post building, impact, and sustainability

B

Procurement and building

KEY MESSAGES

9 Procurement and management of building works

- Procurement and site supervision must guarantee the safety and wellbeing of workers and children.
- Carefully planned procurement can boost the local economy, improve livelihoods and social cohesion.
- It is important to work with contractors and suppliers to develop context appropriate procedures for the management of building works.

10 Practitioners and communities build together

- Building with children and communities is an empowering experience that requires careful planning.





Step 9 Procurement and management of building works

Key points:

- Procurement and site supervision must guarantee the safety and wellbeing of workers and children.
- Carefully planned procurement can boost the local economy, improve livelihoods and social cohesion.
- It is important to work with contractors and suppliers to develop context appropriate procedures for the management of building works.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement

Steps:

9. Procurement and management of building works

10. Practitioners and communities build together

C Post building, impact, and sustainability

9.1 - Procurement

Procurement is the process of finding and acquiring goods, services, or works from an external provider. In built interventions, procurement is the process through which a building contractor is identified, assessed and hired for a project. The success of procurement is often assessed on the costs in relation to the quality of goods and services delivered, however, procurement can also have an impact on the following areas:

• Safeguarding vulnerable adults and children

For example, by reducing the exploitation of cheap labour and eradicating child labour practices. As construction projects involve numerous tasks that require few or no skills, the sector attracts unskilled, vulnerable labourers seeking a daily income. In countries where high levels of unemployment are combined with other vulnerabilities (e.g. legal status), workers may accept very low wages and often unsafe and exploitative working conditions. Vulnerable children might also be employed.

Procurement for built interventions should therefore focus on safeguarding the people working on the construction site, as well as in the supply chain of materials and services. For example, in some areas of Lebanon it is common to find children working in steel factories. Therefore, if a project involves purchasing steel, visiting the supplier should be part of the procurement process to ensure that no child is hired to fabricate their products.

Guaranteeing a fair wage can help prevent adult exploitation. Fair wages should be determined through a consultative process with residents and other relevant actors, taking into account local legislation and regulations, rather than market prices, as these may reflect exploitative practices. Decisions on pay should be openly discussed with contractors and subcontractors, and monitored through maintaining a register of all workers on site, as well as carrying out an induction with new workers.

To ensure the highest standards of safeguarding, each implementing organisation should consult relevant guidelines such as those below, and national legislation. It also should review its own policies to ensure that an effective and practical process is in place.

- International Labour Organisation (ILO) 2019. [🌐 Integrated Strategy on Fundamental Principles and Rights at Work 2017-2023](#).
- UNICEF 2014. Child Labour and UNICEF in Action: Children at the Centre.
- Save the Children 2019. [🌐 Save the Children's Position on Child Labour](#).

• Livelihoods

For example, by hiring unskilled labourers and training them alongside skilled workers. Some construction jobs require low skills, therefore, in many countries the construction sector employs people unable to continue their education. Making the construction site an on-the-job training opportunity for local unskilled labourers, where possible comprised of both host and displaced residents, can result in higher earnings and improved livelihoods. Implementing actors can deliver livelihood programmes through training local workers in construction techniques and skills.

It is important that this aspect is taken into consideration from the start of the project, and that the implementing organisation takes full ownership of the process, making it part of a well-structured livelihood programme. As some contractors may be unfamiliar with introducing livelihood programmes into their work, this aspect must be properly discussed rather than simply imposed, for example, as a contractual requirement.

• Local economy

For example, by purchasing materials from small, local businesses. A significant part of the budget for a built intervention is allocated to building materials. Purchasing building materials locally can boost the local economy and provide income to local businesses (see [step 7](#) - Choosing materials, skills and technologies). Purchasing locally can sometimes mean higher prices, so this needs to be taken into account when planning and designing the intervention. However, buying locally could result in lower maintenance costs in the long-term, as there is no need to import replacement components.



- 1 Introduction
- 2 Key concepts
- 3 **Hands on**

A Designing with children

B Procurement and building

Steps:

9. Procurement and management of building works

10. Practitioners and communities build together

C Post building, impact, and sustainability

• Community cohesion

For example, through hiring local labour and purchasing local materials. In some contexts, the construction site might be located in an area where there are tensions between different groups, such as between displaced and host communities, while funding is often targeted at a specific group only (e.g. refugees). Built interventions offer an opportunity to inject a significant portion of the budget into local businesses and labour. This can help alleviate some tensions as the host community, which is often in a low-income area of the city, receives an economic benefit.

• Health & safety (H&S) practices

To promote the wellbeing of vulnerable individuals who take part in all phases of the construction process. Health and safety requires attention when planning a built intervention, particularly because construction workers are often vulnerable and low skilled. A well-developed system for identifying hazards, evaluating risks, and implementing procedures that prevent and mitigate risks can ensure that unsafe practices are eliminated or reduced.

A H&S plan should identify the roles and responsibilities of different people to ensure the safety and wellbeing of workers throughout the project, including the provision of:

- welfare facilities (e.g. changing area, drinking water and toilets);
- induction for on-site rules;
- procedures for training and supervision;
- personal protective equipment (PPE);
- emergency plans such as first aid and fire plans;
- control measures for hazard/risk assessments.

Further guidance can be found on the [Safety and health in construction](#) (International Labour Organization, 1992).

• The quality of the built environment

For example, by engaging with the contractor on the importance of different aspects of design and their impact. Making the contractor a partner in the project can enable the sharing of reasoning behind design choices, spatial configurations, choice of materials, etc. This creates mutual learning, as contractors understand the full potential of built interventions, and practitioners learn from the experience of the contractor. For example, if a contractor starts to see the value of buying local materials, hiring local labour, and applying safety measures on site, they might apply these principles in other projects, generating better built interventions.

The procurement process is usually governed by policy and procedures which dictate the steps for hiring a contractor. These policies and procedures differ from one organisation to another, but they often share similar principles. Developing a detailed procurement process is an important step towards guaranteeing the desired quality and impact of a built intervention. The [United Nations Procurement Manual](#) (2020) offers a comprehensive guide that can be used to tailor procurement policies and procedures for a variety of organisations.

It is good practice for architects or engineers designing built interventions to keep a database of selected local providers that can be shared with the contractor when required. This becomes particularly important when the design requires elements that might be difficult to source locally. Nevertheless, the design should aim to use local materials where possible, reducing the need for imported components (see [step 7](#) - Choosing materials, skills and technologies).

Sometimes procurement processes and regulations set up by international organisations tend to favour established, larger, non-local contractors and make it difficult to use contractors within the community, who can be much smaller. Equally, such policies can make it difficult to purchase materials through small local suppliers. Managing smaller contractors also requires more work. There should be recognition of the importance of a localised procurement policy adapted to the local context, and its impact on many of the issues presented in this handbook. As mentioned in [part A](#), it is important to build strong partnerships with funders and to discuss the importance of enabling an empowering procurement process.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement and building

Steps:

9. **Procurement and management of building works**

10. Practitioners and communities build together

C Post building, impact, and sustainability

9.2 - Management of building works

Compiling a plan for managing building works ensures that all the procedures and provisions set during the procurement process are implemented during the construction phase.

Site management is usually the responsibility of the contractor. However, it is important for the implementing partner and contractor to develop a plan jointly. This ensures that the built intervention is delivered as planned in terms of technical specifications and timeline, and that health and safety measures are implemented correctly.

A collaborative plan may be particularly significant when the site management contains elements that might be new for a contractor, for example, certain procedures on the provision of Personal Protective Equipment (PPE) for all hired labour. Such procedures should be discussed in detail to guarantee their implementation. Imposing rules on the contractor without discussing the reasons behind them may lead to non-compliance.

The implementing partner sending regular updates to all partners – including local authorities or whoever granted the permit to build – can help maintain a smooth process during construction and avoid issues that might require a pause, causing delays and additional costs.

9.3 - Site supervision

Clear procedures for site supervision should be in place. This involves two main activities: technical supervision and policies supervision (health & safety, safeguarding, etc.). Technical supervision ensures that the design specifications are respected in terms of dimensions, specifications and quality of building materials. This type of supervision should be conducted by a qualified practitioner such as an architect or engineer. Policies supervision means ensuring that all aspects indicated in the procurement process and the plan for the management of building works are implemented on site.



9.4 - Context appropriate procedures

Particular attention should be paid to developing effective, context appropriate, supervision methods and procedures linked to the policies. For example, if the safeguarding policy aims at promoting the wellbeing of vulnerable adults, this objective should be applied in procedures to the reality of the construction site. Questions to consider in this instance may include: What aspects put the wellbeing of workers at risk? How can such risks be mitigated or removed? How can mitigation measures be effectively supervised?



- 1 Introduction
- 2 Key concepts
- 3 **Hands on**

- A Designing with children
- B Procurement and building**

Steps:

- 9. Procurement and management of building works**
- 10. Practitioners and communities build together
- C Post building, impact, and sustainability



Step 10 Practitioners and communities build together

Key point:

- Building with children and communities is an empowering experience that requires careful planning.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement

Steps:

9. Procurement and management of building works

10. Practitioners and communities build together

C Post building, impact, and sustainability

This form of community engagement in construction is rare, however, as it poses some challenges:

- It can be costly for the implementing organisation as team members must spend multiple days on site with the community;
- There could be insurance implications (higher premium costs) for allowing staff to work on the construction site;
- Many organisations do not have staff trained for this type of activity, as building work is usually contracted to construction companies;
- It can take longer to complete the built intervention this way, because it includes coordinating and organising several community activities.

Despite the difficulties, it is still possible, and valuable, to conduct collective building activities during the construction phase.

A carefully considered construction plan must be in place for this type of community engagement to succeed. Collective building activities should be deliberately placed at different stages of the construction process. The following are examples of possible, simple and low-cost activities that can be organised with community members on a building site:

- Mural painting;
- Hands-on design and installation of certain elements (e.g. seating areas, furniture);
- Decorating elements (e.g. furniture, wall panels);
- Planting.

The choice of materials, decided during the design phase, affects the type of activities that are possible and safe to be conducted with community members. For example, if an intervention is designed using mostly timber, it may be easier to engage the community than if the main material is steel. Steel requires highly skilled labour and substantial safety measures to be in place, while timber is easier to work with.

Children can also actively participate in the construction, and there are many safe and structured activities that can enable this. Children should not participate in construction phases where hazards are present, such as ground works, concrete pouring, etc. Other phases, such as building furniture and finishing, may be safer. Nevertheless, children can visit the site throughout the building process in a controlled way, which allows them to see the progress of the elements they suggested during the design phase.

DeCID Handbook: Co-designing built interventions with children affected by displacement



PLACE AU CHANGEMENT

Saint-Etienne, France, 2011



Photo courtesy of Collectif Etc

'Place au Changement' is a transformative project that turned a wasteland lot into a vibrant public square and initiated a process which brought the community closer together. For an entire month, the construction site was open to children and local residents with three different types of workshops held every day:

- A carpentry workshop to build the outdoor furniture for the park;
- A graphic design workshop to design and paint the background walls of the public square;
- A gardening workshop to learn about plants and help with the maintenance of the green areas.

Other activities, such as concerts, circuses, open air cinema, special meals, debates, etc. were organised by local associations and artists, helping to make the project an enriching experience for the various communities living in the neighbourhood.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement and building

Steps:

9. Procurement and management of building works

10. Practitioners and communities build together

C Post building, impact, and sustainability

Children can also actively participate in the construction, and there are many safe and structured activities that can enable this

It is obviously fundamental that visits and activities are safe for children, and that the construction site is adequately equipped with hazard protection (e.g. any ground excavations are covered, scaffolding has been removed or adequately protected).

Examples of building activities involving children include:

- Wood working with safe tools to assemble elements of the intervention (e.g. furniture);
- Painting intervention elements (using safe paint);
- Planting.

When children visit the site, the facilitator should:

- Give children a tour of the construction site;
- Explain why they are on site (e.g. to build, to learn and enjoy their day);
- Conduct a warm up activity (see [box 10](#));
- Conduct the core activities (e.g. building, site visit);
- Conduct a wind down activity.

It is useful to display on site a 3D visualisation of the final outcome, highlighting children's contributions from the participatory design activities. This visualisation alongside being physically present onsite helps children to gain a greater sense of control over the space. Seeing the space being built helps children visualise how their ideas are being transformed into physical outputs. The facilitator and building team should discuss with the children any questions they have about the design and construction. In some cases, it may still be possible to integrate children's feedback into the design. However, it is important to manage children's expectations before asking for suggestions, as it is likely that only minor changes will be possible once construction has started. These activities can engage children and their caregivers simultaneously.

During CatalyticAction's [Ibtasem playground](#) construction, one participating child was very energetic; though his teachers had previously told the facilitator that he was disobedient. During the classroom-based participatory design activities he hadn't been very engaged, but during the construction he took his tasks very seriously. He had understood that he had a responsibility and that his contribution was important.



Children can develop a sense of ownership towards the project through simple activities, like packing and unpacking construction equipment. The [Flying Seagull project](#) clowns engage children in performances, but also in the erection and removal of the temporary stage. These simple acts gives children a sense of ownership towards the space and the activity carried out.

If the construction is carried out by a contractor, it is important to inform them of such community activities early on so that they can safely plan the activities into the construction timeline.

While there are many benefits in involving children in structured construction activities, there are important considerations to make in terms of child labour and safeguarding issues. In many contexts, displaced children work in order to support their families, and it may be difficult for children or external actors to distinguish between the participation of children in the construction process as a learning activity, and other forms of paid labour.

Moreover, in contexts where building contractors routinely employ underage apprentices, contractors may find it difficult to understand why they are banned from using child labour while they see children on site. Caregivers, other community members, and institutions (school, municipalities) need to be involved in discussions regarding children's participation in the construction, in order to ensure that children and their wellbeing remains paramount.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement and building

Steps:

9. Procurement and management of building works

10. Practitioners and communities build together

C Post building, impact, and sustainability



DISPERSIONE ZERO

Sassari, Italy, 2015



Photo courtesy of Project for Public Spaces

'Dispersione Zero' was a collaborative project between TaMaLaCà and a primary school, which involved 20 students aged 11 to 13. The project was funded under a ministerial programme to reduce school dropouts. Project leaders decided to make unconventional use of the grant by purchasing carpentry equipment for a small workshop on the school premises.

The learning-by-doing approach and the collaborative non-hierarchical work environment were the key elements of the project. Students conceived and realised a spatial intervention that transformed an underused sidewalk into a welcoming space that encouraged new individual and collective uses, such as stopping, playing and reading.

The installation was characterised by coloured stripes painted along the path that overlooks the main entrance of the school, and creative street furniture that students built in the workshop under the guidance of TaMaLaCà.

While the installation lasted only a few days, the carpentry workshop has remained in the school and become a neighbourhood service, promoting future interventions of urban re-activation.



COOKS NAGAR SETTLEMENT

Nagapattina, India, 2006

The reconstruction project in Cooks Nagar was part of Save the Children's 'Tsunami Rehabilitation Programme' which involved children and their families in rebuilding the destroyed settlement to provide a design that met their needs.

Children were particularly enthusiastic about the building process. They engaged in many activities, such as wetting down concrete slabs and foundation walls during the curing process, wetting the bricks before handing them over to the masons, and checking deliveries to make sure all the materials arrived at the building site. They also monitored the construction, ensuring that the workers did not mix up the design of different houses, which were individually chosen by the families during participatory workshops. During the process, children built an exceptional relationship with the workers and learned a lot from them, such as how to monitor the quality of materials, and how to test the durability of the bricks by soaking them in water for a few hours.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

B Procurement and building

Steps:

9. Procurement and management of building works

10. Practitioners and communities build together

C Post building, impact, and sustainability

C

Post building, impact, and sustainability



KEY MESSAGES

11 Activation, ownership and management

- Activities with children and their community organised with local actors can activate a space and foster ownership.
- Full ownership of a space by children and their communities contributes to long-term sustainability.

12 Maintenance and follow-up

- Careful design and procurement reduce the need for maintenance and its costs, as capacities and materials are available locally.
- Regular checks and visits ensure the safe and smooth operation of built interventions.

13 Impact and evaluation

- Co-designed built interventions make an impact through their physical outputs and the processes that lead to their implementation.
- The value for money of co-designed built interventions must be assessed by considering the multiple short- and long-term impacts, including the social impact of the process itself.
- Allocating adequate time and resources for evaluating interventions and their long-term impact can contribute to learning.
- Children and their communities must be part of the evaluation process.





Step 11 Activation, ownership and management

Key points:

- Activities with children and their community organised with local actors can activate a space and foster ownership.
- Full ownership of a space by children and their communities contributes to long-term sustainability.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement and building

C **Post building, impact, and sustainability**

Steps:

11. **Activation, ownership and management**

12. Maintenance and follow-up

13. Impact and evaluation

Some built interventions are designed to accommodate specific users and activities (e.g. students using a school building) while others are designed for multiple users (e.g. residents using a public park). When construction ends, project partners might want to organise strategic activities to encourage use of the space and symbolically hand over control to its users. This is more important when the built intervention seeks to change or enhance the use or function of a space.

For example, [CatalyticAction](#) implemented a number of interventions in public parks across Lebanon, encouraging people to use the parks more. The impact of new facilities for children (such as playground equipment) was enhanced through events which introduced the new spaces to children and their families. When designed with children and the community, these events can expose residents to a wide range of uses of the space and build social relations around it. This can have a significant impact on the long-term sustainability of the built intervention.

The use of a playground by children can be autonomous and unplanned. However, occasional structured sport and educational sessions can help develop relationships between different children, for example, between displaced and host children, who may have otherwise play separately.

Often the community has clear ideas on how to use a space. When the local community takes full responsibility for the activation and programming of a space, the dependency on external inputs (funds, skills, knowledge) reduces.

The designer, organisation, and other actors (including the community) may be unable to visualise all the ways that the space can be used. Moreover, the needs of the community who co-designed the intervention may change. Even the community itself can change, especially in displacement contexts. Therefore, the space should be adaptable to different uses, to allow children and their community to continue appropriating it. This means that the co-design process should build the capacity of those entrusted with the management of the space to continue a co-design and open management and maintenance approach. Unexpected and unplanned uses of built spaces are positive signs of appropriation and ownership by the local community. Unplanned uses may become a concern only when they go against the public function of a space, for example, if a public playground is occupied by a family for private use, excluding other residents.

Engaging the community from the beginning of a project is an effective way to build a sense of ownership towards it and to ensure its sustainability. When the community takes full ownership of a project, they participate in planning the use of the space, its activation and programming, adapting it to their specific needs, and contributing to its maintenance. From the start of a project, it is important to discuss with all stakeholders and reach clarity on who is going to manage the space post-construction. Depending on the context and type of intervention, there may be different actors involved. For example, this can be the NGO or local authority running the school, the playground, the child friendly space, etc. When it comes to public spaces, ongoing management becomes more complex.

In most countries, public spaces are the responsibility of local governments and the surrounding community. Local authorities and governments are mandated to create and manage public spaces by working with communities, the private sector and marginalized groups such as refugees. This balances competing interests in the pursuit of the common good. In the case of co-designed interventions with children, local governments should ensure that their management puts all children first by ensuring inclusivity, accessibility and by preventing private interests invading public space.

Place-keeping is crucial when dealing with public space. Adequate resources for its operation and maintenance should be provided to ensure long-term sustainability. Collaboration between local government, communities and, when appropriate, the private sector plays a crucial role. Local governments and other actors managing co-designed public spaces have to find the right balance between regulation and deregulation. The rules around the uses of public spaces should be given particular attention to avoid negative impacts on the most marginalised children.

For example, in many cities in the Middle East public parks are fenced and managed by guards (often hired by the local municipality). Engaging the guards from the early stages of the project would be key to ensuring that the implemented spaces are inclusive and accessible (i.e. that all children can access the park without discrimination).



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

B Procurement and building

C Post building, impact, and sustainability

Steps:

11. Activation, ownership and management

12. Maintenance and follow-up

13. Impact and evaluation



Step 12 Maintenance and follow-up

Key points:

- Careful design and procurement reduce the need for maintenance and its costs, as capacities and materials are available locally.
- Regular checks and visits ensure the safe and smooth operation of built interventions.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement and building

C **Post building, impact, and sustainability**

Steps:

11. Activation, ownership and management

12. Maintenance and follow-up

13. Impact and evaluation

All built interventions require maintenance. The maintenance plan needs to be part of the planning process and should be discussed among all partners. The key points to consider regarding maintenance are:

- Cost;
- Frequency;
- How to do it;
- Who will do it.

Thinking about maintenance from the early design stages can help with the smooth running of the space. If the design adopts materials that require frequent and costly maintenance but does not plan for it, the durability of the intervention can be compromised. Equally if the partners do not agree on the responsibilities around maintenance during the partnership phase, this can lead to a lack of maintenance which, in some cases, can create hazards. For example, if a timber element mounted at height is not properly maintained, it can fail and fall, causing harm to users.

In displacement contexts characterised by scarce resources and, often, sudden political and socio-economic changes, having an agreed maintenance plan in place does not always ensure that maintenance will be carried out. Therefore such interventions should be designed to reduce maintenance to a minimum by excluding high maintenance materials and components. When an intervention is built in a space where access is controlled (for example a school building), the maintenance is often conducted by the institution running the space. In displacement contexts, this can be an NGO or an agency running education activities. They often have limited resources and may not own the building, again making it important to keep maintenance costs to a minimum.

In the majority of public space interventions, local governments are responsible for carrying out maintenance. Whoever is responsible must be fully aware of the maintenance costs and commit to covering them in the long-term. In displacement contexts, local governments often have limited budgets for maintaining public spaces. Therefore, keeping maintenance costs to a minimum is once again important for the durability of the built intervention.

There can be other arrangements regarding maintenance: these two examples present only the most usual situations in contexts of displacement.

In some cases, setting aside funds for future maintenance can be good practice, but this may be difficult as typical funders do not accept project
DeCID Handbook: Co-designing built interventions with children affected by displacement

expenses after the main project's closing date. Therefore, they may be unwilling to support expenses years after the intervention's construction. A similar challenge relates to the long-term monitoring and evaluation of co-designed built interventions (see [step 13](#)).

An important document for the maintenance process is the Operation & Maintenance (O&M) manual. This can be produced by the architect or by the contractor implementing the built intervention.



OPERATION & MAINTENANCE MANUAL

For small-scale built interventions, the Operation and Maintenance (O&M) manual should contain at least the following documentation:

- As built drawings: Technical drawings representing the intervention as built (also indicating materials used);
- Instructions for operation and maintenance: This contains information on how to operate the space from a technical point of view, in particular what should not be done. For example, whether roofing can be walked on or not. Maintenance instructions will indicate how often to conduct maintenance, how to conduct it and where to source the necessary materials for it;
- Copies of guarantees and warranties: Including warranty documentation on building materials used;
- Planned maintenance schedule;
- List of providers: In support of maintenance instructions, the list of providers is helpful should any built component need replacing. If a specific component needs maintenance, having the list of providers who worked on the project (such as carpenter or electrician) can make the maintenance process more effective as they have pre-existing knowledge and may know how to fix the issue.

It is useful to assume a worst-case scenario in terms of the capacity of those who will conduct maintenance. This means that instructions and drawings should be very simple and clear, in order to prevent harm and facilitate efficient and safe maintenance.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

B Procurement and building

C Post building, impact, and sustainability

Steps:

11. Activation, ownership and management

12. Maintenance and follow-up

13. Impact and evaluation

Thinking about maintenance from the early design stages can help with the smooth running of the space



As highlighted in [part A](#), maintenance is easier when the materials and skills for the built intervention are sourced locally. Regular follow-ups (two-three times per year) help ensure good functioning of the built intervention. The architect can conduct these in person or over the phone (when possible). Even though there may not be funding allocated for this phase, the negative consequences of not conducting follow-ups can be greater than financial savings from not revisiting the projects. If built interventions by NGOs are not properly maintained, this can lead to reputational damage and potentially put beneficiaries in danger. When projects are built through participatory design, participants can also help in monitoring the use of the space and report issues.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

B Procurement and building

C Post building, impact, and sustainability

Steps:

11. Activation, ownership and management

12. Maintenance and follow-up

13. Impact and evaluation





Step 13 Impact and evaluation

Key points:

- Co-designed built interventions make an impact through their physical outputs and the processes that lead to their implementation.
- The value for money of co-designed built interventions must be assessed by considering the multiple short- and long-term impacts, including the social impact of the process itself.
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1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement and building

C **Post building, impact, and sustainability**

Steps:

11. Activation, ownership and management

12. Maintenance and follow-up

13. Impact and evaluation

This handbook has presented co-designed built interventions as complex processes involving multiple pathways for generating positive impacts. These can be broadly divided into two areas:

- Impact of the product: Impact generated by the physical features of the building itself;
- Impact of the process: Impact generated by the process leading to the implementation of the built intervention.



• Impact of the product

As presented in [part A](#), appropriate physical features such as colours, openings, and the height of furniture can impact children's wellbeing. The built intervention itself and its aesthetic value can also positively impact on the local community. For example, a good quality building that is a source of pride for the community can improve the self-esteem of its users and the community in which it is located. A properly constructed building can allow key educational activities to take place in a safe and conducive environment.

• Impact of the process

As discussed, the process that leads to the implementation of a built intervention may generate positive impacts in multiple ways. In addition to the impact on children, caregivers and those involved in the process of building can generate a positive impact for the community. For example, choosing local materials and hiring and training local labour can improve the local economy and the livelihoods of vulnerable individuals.

Both types of impact can be measured in the short term immediately after project implementation, and in the long-term.

Drain et al. (2018) suggest a framework for the evaluation of participatory design projects based on three types of outcomes:

- **Insights:** the knowledge gained by the design team that can be leveraged for positive impact in the future;
- **Solutions:** the outcomes generated through the creation of material things (physical artefacts) and organisation, rules, and information flows (process changes);
- **Empowerment:** this can take many forms, including political empowerment in the workplace, creative capacity building, social empowerment for persons with disabilities, and technical training.

The evaluation should assess if outcomes in these three areas are aligned with the values underpinning a participatory design project.



1 Introduction

2 Key concepts

3 **Hands on**

A Designing with children

B Procurement and building

C **Post building, impact, and sustainability**

Steps:

11. Activation, ownership and management

12. Maintenance and follow-up

13. Impact and evaluation

Challenges for measuring long-term impact

Measuring long-term impact requires long-term engagement with the project and its location. Built interventions, especially in displacement contexts, often do not have funding allocated for evaluating long-term impact. This is partially due to the fact that built interventions are often conceived as physical responses to the need to create a space, hence the perceived impact is limited to having provided such space. In many cases, funding for a built intervention is project-based for a maximum of one to two years. Therefore, it is often difficult to allocate funds to carry out impact evaluations after the end of the project cycle, which frequently coincides with the end of the construction.

Despite these challenges, all of the actors involved can learn a lot from evaluations carried out long after the end of the project. An evaluation does not need to be time consuming or expensive. Simple evaluation processes can provide valuable feedback, which can be integrated into future projects. Evaluations that compare pre- to post-project implementation are particularly effective but require data collection before implementation (baseline).

A participatory approach

Both qualitative and quantitative data can be collected and evaluated for built interventions. Evaluating built interventions can involve feedback from users, which can be collected via interviews or questionnaires; observing the users; and by approaching children, caregivers, those who work in the interventions (e.g. teachers, social workers), and those who worked on the construction.

Using open questions may help identify unexpected impacts and the pathways through which the built intervention, and the process leading to it, have had an impact on different aspects of children's and other residents' wellbeing. For example,

- Did the project create a better space for a particular community/children's needs?
- Do children behave differently?
- Has school attendance changed?



URBAN THINKSCAPE
Philadelphia, United States,
2018



Photo courtesy of Sahar Coston-Hardy

'Urban Thinkscape' aimed to co-design an existing public space into an environment for playful learning for children and their caregivers through a cluster of interactive installations. The process included pre- and post-implementation observations and surveys at both the 'Urban Thinkscape' site and a standard playground in the same area. This measured if and how the new installations affected interaction between children and caregivers, in comparison to the nearby playground.

Community members trained as data collectors conducted the so-called 'naturalistic observations'. For each caregiver-child group that stopped in the site area, the data collector filled out an observation sheet. The observation protocol provided for the analysis of conversational content such as the use of numerical language; talk about colours, letters and sounds; the nature of the verbal interaction; and non-verbal interaction like laughing, touching and pointing. They also collected data about the use of technology, amount of physical activity and the caregiver's communication style.

Survey data was compared based on two initial hypotheses: that caregivers and children would have more verbal engagement and interaction after the completion of the project and in comparison to the other playground; and that at the 'Urban Thinkscape' site their conversations would reflect more on the installations' topics.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

B Procurement and building

C Post building, impact, and sustainability

Steps:

11. Activation, ownership and management

12. Maintenance and follow-up

13. Impact and evaluation

- Do caregivers feel differently about children playing in a playground or attending school? Have they seen positive changes in the children as a result of their participation and use of the intervention?
- Have the workers found better employment opportunities with the new skills acquired?
- Have new construction techniques been adopted locally in other construction projects?
- How have relationships/interactions between different communities (e.g. different groups of refugees, refugees and hosts) changed?

In the spirit of participation, it is important to involve evaluation participants in the process of analysing the results. This is particularly important when looking at attribution of impact. Some changes can be linked to the intervention, while participants are more likely to be aware of the broader issues affecting their context which should also be considered. For example, a high-quality school built with children's input may improve attendance, but attendance could also be affected by a safer neighbourhood, a school feeding programme, or a cash transfer programme conditional on school attendance. Making sense of unexpected and unintended impacts also requires evaluation participants.

Evaluations can also be conducted with children, and there are available tools to help practitioners achieve this. If questionnaires are used, the language needs to be simple and age appropriate.

Example of questions for children:

- Can you tell us about your typical day playing?
- Can you tell us how you were playing last year?
- What has changed in the way you play since this playground / school was built?
- What do you do in this place/building?
- What do you enjoy the most?
- What do you find challenging?

Value for money

The impact of co-designed built interventions on the wellbeing of children and their communities goes beyond the impact of the built outputs and the new activities they allow (see for example [steps 7 & 9](#)). However, particularly in humanitarian contexts, built projects are often rushed and quickly assessed only on their physical output. This approach fails to recognise the deeper, longer term impacts of co-designed interventions. With the increasingly protracted nature of displacement, interventions for children affected by displacement should adopt a more comprehensive evaluation framework.

Built interventions that are co-designed with children affected by displacement can offer excellent value for money, but only if the impact of the whole process is taken into consideration, and a longer time frame is adopted. For example, the benefits of the community having increased ownership of the intervention, and the improved local capacity for carrying out maintenance, show themselves only after the inauguration of a new built project. Sometimes budget constraints are used to justify interventions for children with limited or no participation. However, it is better to build something smaller through participatory design that empowers children and their community, as described in this handbook, than it is to create an intervention that children and their community do not need, that is in the wrong location, or that may not be fully used or looked after.

Proper evaluation processes that include assessments of long-term impacts are needed to demonstrate to funders and other stakeholders the value for money of co-design approaches. Moreover, given the complexity of these interventions, the need to adapt them to specific contexts, and the changing nature of displacement conditions, continuous learning from different projects and the actors involved is required. Such learning processes – of which this handbook forms part – should be based on rigorous and comprehensive evaluations to provide evidence for the continuous improvement of interventions for the benefit of children affected by displacement. Therefore, actors and funders should invest sufficient resources into project evaluation.



1 Introduction

2 Key concepts

3 Hands on

A Designing with children

B Procurement and building

C Post building, impact, and sustainability

Steps:

11. Activation, ownership and management

12. Maintenance and follow-up

13. Impact and evaluation

Built interventions that are co-designed with children affected by displacement can offer excellent value for money, but only if the impact of the whole process is taken into consideration, and a longer time frame is adopted



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Children make up 40% of the 80 million displaced people globally. Their experiences of displacement are diverse and responses must be tailored to their realities. This handbook aims to increase the number and quality of built interventions that have been co-designed with children affected by displacement in the urban context. It provides practical guidelines for co-designing that ensure these interventions put children's wellbeing first. Co-designed built interventions can empower children, have a positive impact on the local economy, improve social cohesion and integration, and deliver better urban spaces and infrastructures for children and their communities.

UNICEF works in the world's toughest places to reach the most disadvantaged children and adolescents – and to protect the rights of every child, everywhere.

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