ASD-PUBLICS GO-CREATION GUIDE

Designing public spaces with children with autism and their families



Activating Spaces with neuroDiverse Publics

Project Partners

institut



Anfàncta i adolescència





Collaborators





EIT Community New European Bauhaus ASD Publics is supported by the European Institute of Innovation and Technology (EIT), a body of the European Union.

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About the Co-creation Guide

Summary

This document describes a methodology to co-design play areas with children with autism and their families. This methodology has been developed through the learnings from ASD Publics, a New European Bauhaus project that aims to improve public spaces with and for autistic children and their families.

The document is conceived as a guide made out of practical recommendations. It outlines the actors that should be involved, their role, and the process to follow. This has been broken into project phases, placing a co-creation workshop at the centre, and each phase into several steps. It also includes some practical considerations and ideas.



ACTORS & ROLES	7
Project Team	8
Workshop Participants	8
Other Key Actors	9
PHASES	10
Before the Workshop	11
During the Workshop	16
After the workshop	20



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About ASD Publics

PLAYABLE SPACES FOR ALL

Activating Spaces with neuroDiverse Publics (ASD-Publics) is a New European Bauhaus funded project that aims to improve public space, and particularly public playgrounds, with and for children with autism and their families and caregivers. To do so, the project has developed knowledge methods and tools, namely Design Guidelines and a Co-Creation Methodology, to inform urban practitioners and government officials about the difficulties that this community faces in these spaces as well as how to mitigate these issues. These tools have been created from the findings of several research activities, including four participatory co-creation workshops that explored new ways of engaging children with autism through play and creative ways of exploring multi-sensoriality and connectivity with space.

Learn more about the project

Aknowledgements

We want to express our deepest gratitude to all the families and children that participated in the project's research activities. ASD Publics would have not been possible without your collaboration. We would also like to thank the members of the ASD Publics Advisory Board, Amaia Hervás, Maria Heras and Zaida Muxí for your guidance in critical moments of the project. We are also extremely grateful to Aprenem Autisme Associació and the Federació Catalana d'Autisme as well as Xavier Altimira and Raquel Motllor for your invaluable support and dedication to the project. Many thanks to the experts that participated in the discussion sessions. We would also like to extend our sincere thanks to the Col·legi d'Arquitectes de Catalunya for hosting and contributing to the Public Space, Play and Neurodiversity Colloquium and Escola Jaume I for hosting a workshop. Lastly, we would like to thank the New Europe Bauhaus and the European Institute of Technology for supporting the project.

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INTRODUCTION

Despite enormous progress in making public spaces inclusive and accessible for all, **some collectives**, **such as neurodivergent people and particularly children with Autism Spectrum Disorder (ASD)**, **still face difficulties to use and enjoy urban public spaces**. ASD is a neurodevelopmental condition characterised by alterations in social communication, repetitive behaviours and restricted interest patterns that affects a growing number of people throughout their life, turning into social isolation, anxiety, depression and Attention Deficit Hyperactivity Disorder (ADHD) among adults with ASD.

Challenges to access public spaces aggravates their risk of social exclusion and prevents them from playing and exercising outdoors, especially in green public spaces where there is evidence of multiple sensory-motor, emotional, and social benefits of nature for children and youth with ASD ranging from anxiety reduction to improvement of sensory skills. The exclusion from these spaces also affects their families, particularly when the person with autism is still a child and needs to be accompanied by an adult.

The design of public spaces rarely takes into account the needs of children with autism and their families. This community faces serious difficulties to find spaces that are appropriate to their children's needs. The **invisibility of this community in the city's urban planning strategies** and policies exposes gaps in both social awareness and urban practitioners' knowledge about this collective's specific needs - gaps containing broader social costs if left unattended. While there is a large body of knowledge on autism, there is almost no collaboration between urban practitioners and the experts that have this knowledge nor with the affected community. In order to bridge this gap, **there is a need for new tools to design sustainable playable spaces for and with the children with autism and their families** to promote public spaces that are truly inclusive for all.

ASD Publics emerges from this need. More specifically, the project has developed knowledge methods and tools to inform urban practitioners and government officials about the difficulties that this community faces in these spaces as well as how to mitigate these issues.

The project has culminated in three interrelated documents that can be read independently: The ASD Publics Design Handbook with design guidelines to design inclusive public playground, the **ASD** Publics Co-Creation Guide (the present document) that describes a methodology to include children with autism and their families to the design of public playground, and the ASD Publics Process that outlines the process of the project and the key findings that informed the other two documents. The first two documents are crafted as practical manuals and addressed to groups of residents, neighbours associations, architecture and urban design studios, policymakers and any entity or individual willing to create an inclusive playground or to transform an existing one to make it more inclusive for and/or with this community. The third one provides background to the two manuals and it is mostly addressed to people who want to better understand where the recommendations in these come from or want to do further research on the topic.

This document describes a methodology to co-design play areas with children on the autism spectrum and their families. It is structured in two main sections. The first one describes the actors to be involved in a co-creation process to transform a public play area with children in the autism spectrum and their families. The second one describes the project phases.

Terminology Note

There is much debate on the correct terminology to refer to those who have received an autism diagnosis. Based on research on accepted terminology and after consulting the websites of several European organisations dealing with autism as well as our partner autism associations and experts, ASD Publics combines the expressions 'autistic person/people', 'people/person on the autism spectrum' and 'people/ person with autism'.

ACTORS & ROLE

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FAMILIY MEMBERS WILL PROVIDE EMOTIONAL SUPPORT AND MAY HELP THEIR CHILDREN DURING THE WORKSHOP ASD Publics aims to give a voice to the children with autism and their families, allowing them to express their needs and ensuring that these are taken into account. Therefore, it involves a wide and diverse range of actors into processes of co-creation for the transformation of urban play spaces. This guide strategically groups them into three groups according to their role in the project.

Project Team

The project team is the group of people in charge of coordinating the co-creation process and the transformation project. It includes experts in public space design, in participatory processes and in autism. It is possible that a person or a team can cover multiple roles

Public space experts will, ideally, have experience in designing play spaces for children such as public playgrounds and schoolyards. They will lead the analysis of the space prior to the workshops, design the data collection strategy to map what children actually do during the workshop, collect this data during the workshop, and lead the data analysis and the final design of the space.

Participatory processes experts will, ideally, have experience in participatory processes with children. They will be the responsible actor for engaging the families, designing the co-creation workshops and verification sessions and facilitating these.

Autism experts will, ideally, have first hand experience working with children with autism and their families. They will contribute to the analysis of the space prior to the workshops, design the data collection strategy to map autism-specific data, collect this data during the workshop and contribute to the final design of the space.

Workshop Participants

Most workshop participants will only play a role during the workshop but some of them will also contribute to other research activities. They are the main beneficiaries of the project and the key informants, even if some can not communicate their wants and needs in conventional manners.

Children in the autism spectrum are the main target group. When they attend the workshop, there should be no specific expectations on them and rather be allowed to do what they feel like. Most probably, most of them will play with the elements of the workshop but some may not want to or may need more time to do so.

Family members of participating autistic children, including both adults and children, such as siblings, should also take part in the workshop. Having people whom they are familiar with around will make the participating autistic children feel more at ease. They may also help their children during the workshop. This help can take several forms. Young siblings can unconsciously play a modelling role, starting new ways of playing and interaction that the child with autism may engage with. Parents or other adult family members can also do so but they may also consciously help their children to do something and provide emotional support. In addition, they will play a crucial role interpreting their child, something that only those who know the child very well can do, and engaging in other research activities other than the workshop. Lastly, they will be the link between the

project team and the children and, therefore, they must be well-informed at all times and be assured that all precautions are taken.

Other children who use the space on a regular basis and their families may also be invited to participate in the workshop. Similarly to young siblings, they can also play a modelling role. Having them at the workshop will recreate a more similar situation to an everyday experience in public spaces, revealing issues that may be difficult to observe otherwise. This comes with advantages and disadvantages and, therefore, it is important to consider whether to invite them or not and how many of them to invite. This is explained in the following section.

Other Key Actors

Schools, early childhood development centres and local autism associations and schools cahn help the project team to identify and get in touch with the families of children on the autism spectrum that use the targeted space. Early childhood development centres and autism associations can also play an advisory role as they have a lot of knowledge on the challenges that these children and their families face as well as their needs and potential ways to address these.

Local governments, and particularly those departments dealing with public space, park management, and people with disabilities, should be involved in the project. Besides being the client and/or the implementing agency, they regulate, provide standards and have a series of programmes that the project can benefit from or plug into. Including them in the process is also important to raise awareness and create capacity among government officials and institutions.

Using municipal databases

Some local governments, such as Barcelona's, have a database where to find the children with autism in each neighbourhood. While this is confidential data, they may be able to contact these families to share with them information of the project.

Before the workshop				During the workshop		After the workshop			
	Previous analysis of the space	Engaging the families	Data collection preparation	Workshop design	Facilitation	Data Collection	Emotions & prefe- rences data	Data analysis	Verification ses- sions
Publicspace design experts	Attend team site visit & visits with famillies	-	Design collection strategy for data about what chil- dren actually do	-	-	Collect data about what children actually do	-	Analyse data about what chil- dren do and their emotions and play preferences.	Participate in di- scussion sessions
Workshop facili- tation experts	Attend team site visit, organise and attend visits with families, design and distribute survey	Contact families and keep them regularly informed	-	Design the workshop space, materials and play proposals	Facilitate the workshop	-	Send survey to fa- milies and collect them	Contribute with general observa- tions	Organise and fa- cilitate discussion sessions
Austism experts	Attend team site visit & visits with famillies	Design storyline	Design collection strategy for auti- sm-specific data	-	Support children that need extra help, prevent / mitigate crisis	Collect auti- sm-specific data	-	Analyse auti- sm-specific data	Participate in di- scussion sessions



Ethical Compliance

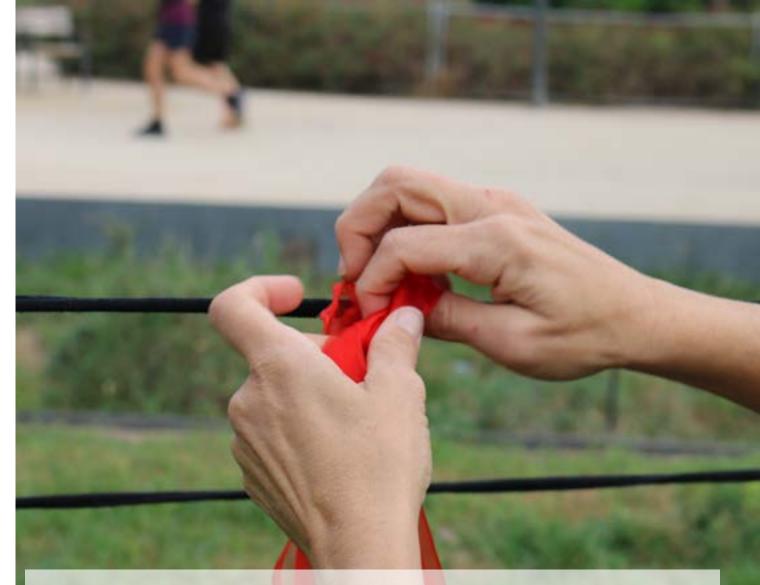
The ethical aspects of a participatory process. Also make sure consent forms for both, the data collection and the image and video consents are prepared and filled and signed by participants or their representatives.

Informing other park users

If the workshop is an "invitation only event", other park users must be informed that they will not be allowed to use that space during the workshop. Posters can be hung at the targeted space for this purpose and local schools can contribute to disseminating the information.

Securing permissions to use the space

Permits to use the targeted public space for the workshop must be secured beforehand with the local authorities. This includes both permissions to hold an "invitation only workshop" and to bring vehicles to transport workshop mate



Before the Workshop

Several aspects must be taken into consideration and prepared before the workshop. One of the important issues to address before the workshop is to decide what the designed space aims to achieve by making it more inclusive for children with autism. Is it a space for them to just have fun? Is it a space for them to learn through play? Is it a space where their parents can feel safe and relax? This is what we have called the "project's approach" and it is described under the Previous analysis of the space. Identifying and engaging the families is also a task that requires a lot of dedication. The success of the participatory process will depend on this activity. Lastly, the data collection strategy and workshop must be designed.

Informing the families

Notify families 1-2 weeks in advance and sent a reminder 1-2 days before the workshop. Minimise the number of messages to avoid overwhelming them. Information should concise and clear and clearly state what is expected from them and their children. Email and/or one-way groups in instant messaging apps are good communication tools.

Coordinating families engagement

To minimise overlaps and make sure that all families receive the same information, assign families coordination to one only person.



Previous analysis of the targetted space

It is necessary to visit the targeted site in order to understand what the space to be transformed is like and what are the needs of children with autism that use it, as well as their families'. It is important to understand that the children's and the adults' needs will not necessarily be the same as adult family members' face concerns related to their children's safety that children are oblivious to. Adult family member's may also be interested in obtaining educational or therapeutic benefits from their children playing outdoors, such as improving their sensorimotor skills or interacting with other children. All these aspects are relevant for the analysis of the space, in addition to those related to general well-being and ensuring that these children can also have fun in public playgrounds. The balance between these different dimensions will depend on the approach of each project and it is something to be decided during the analysis. Some projects may prioritise children having fun while others may focus on learning through play or allowing family members to relax while their children play. In addition and in preparation for the workshop, it is important to also analyse the available infrastructure to support other materials and play elements that may be included in the workshop to be used and tested by children.

To obtain this information, the project team should **conduct a site visit and join participating families to their regular outings to the park**. The project team site visit will familiarise the team with the space and discuss, from the different fields of expertise, key issues for the workshop as well as initial design intuitions. Joining children with autism and their families will give the research team a first hand experience of the issues that this community faces as well as a good understanding of their wants and needs through direct observation and informal interviews. Lastly, it is also recommended to distribute a **survey** with questions about challenges and improvement suggestions to the families of children with autism that use the space on a regular basis. This may however only be relevant for larger spaces that are used by a large number of people or those that are in close proximity to a facility attended by this community, such as a special needs school or an early childhood development centre.

Engaging the Families

An important step before the workshop is to contact the families to ensure the participation of children with autism. It is important to be clear with expectations, of both the workshops (objectives, methodology of the workshop, duration and expected results) and of the objective of the co-creation process.

It is also important to inform the autistic children in advance about the activity they will participate in, where it will take place and what will be expected from them. Sharing **storylines with photos** of the space to be transformed, workshop facilitators and the workshop materials can help the families create this anticipation for the day of the workshop, reducing possible tensions on the day. This can enhance game playing skills, social skills comprehension and reduce uncomfortable situations during the workshop.



Mapping timings

In order to map the time that children spend doing different things, it is possible to add colour coding. This information however may be difficult to gather as children tend to move very quickly and changing colours is not easy when mapping on site.

Data collection preparation

Different types of data should be collected from the workshops. We recommend to focus on three sets of data: Autism-specific data, data related to the children's emotions and preferences, and data related to what they actually do.

When it comes to **autism-specific data**, items such as social interactions, imitation, play skills or some other related abilities may be measured. Depending on the project's approach, that is what the design intends to achieve as explained in the previous section, some of these items will be analysed or not. For example, a project prioritising children's fun will focus on creating spaces that enhance play skills, as children will have more fun if they understand how to play and can do so. However, a project prioritising learning through play, may focus on increasing the number of social interactions and imitation. With this type of data, it is easy to fall into biassed conclusions based on our memory and expectations if we do not use standardised methods during the workshop. One useful tool for doing so is the ESDM curriculum checklist (Rogers, Sally and Dawson; 2009) where all of these abilities are listed in different areas. The curriculum checklist is divided into four levels where level 1 corresponds to the most basic skills for each area and level 4 to more complex abilities. This data must be collected by trained professionals who are familiar with this methodology (autism experts). Each of them can follow a reduced number of children during the workshop and code the demonstrated skill for each of the children.

Data about autistic children's emotions and their preferences should be collected by family members as they know their children very well. It is important to highlight that facial expressions may be different in autism and that an autistic child doing something repeatedly does not necessarily mean that they are enjoying it neither that not doing something means that they do not like it or want to. For example, a smile does not always mean that they are happy. Or something they repeat several times may actually be a ritual, not an enjoyable game. Also, they may prefer to not play with their favourite toy if there are other people around it or they have to gueue for it and they may not play with a particular element because they are not familiar with it and do not understand how to use it, not because they would not like it. Because their expression may be different from the norm, another person might not recognize what an autistic child is feeling, unless they know them well. To help solve this problem, family members can answer surveys after each workshop with this type of information. It is recommended to share the surveys with the families prior to the workshop for them to be aware of the type of information they must watch out for.

Data about what autistic children actually do du-

ring the workshop includes mapping the objects or elements they play with, their body movements and senses activated during the workshop. It is necessary to prepare a base map of the targeted space and the different fixed elements displayed in the area, to create a code for the types of movements and senses you are planning to observe and analyse and to recruit a group of observers that will map each child during the workshop. If possible, each observer will only collect data for one child during the workshop. The maps should aim to reflect what elements or spaces they engaged for longer than others as it is not the same to touch something when walking by than spending 10 minutes playing with it.

"(Inter)active" perímeter

The temporary perimeter can be held on trees, lamp posts and other vertical elements. To make it "(inter)active" it should include sensory play elements such as see bells, fabrics with holes to look through different see-through materials or and elastic pieces of fabric where children can lean on. These must be placed at an accessible height for children. The entrance to the perimeter can be designed as a "symbolic door" that is a play element on itself, including items that make sounds as people go through it, textures, or other playful elements. Lastly, chairs and other elements for seating can also be incorporated into the perimeter.

Interior perímeter - transitional space

An interior perimeter, within the "(inter)active" perimeter, made by a sequence of rugs and chairs where children can rest by themselves or with their family members can be created to separate sensory game in the "(inter)active" perimeter with more active (and loud) game in the central space.

Considerations for the spatial structure

To structure the space, it is convenient to leave a free space without play elements for children to run around. Mediating materials and landscapes should be distributed throughout the space.

Designing the workshop

Designing the workshop implies adding temporary elements to an existing playground, if working on the adaptation of an existing space, or creating a temporary playground on an empty space, if working on the creation of a new space. Therefore, it involves designing these temporary elements as well as their spatial distribution or general structure. Lastly, a mental map for the workshop should also be prepared in advance. This will give workshop facilitators a general idea about aspects such as how to kick-start the workshop, whether all play elements will be displayed at the same time or will be gradually introduced, and how to end the workshop.

Spatial distribution

In terms of the spatial distribution, the design of the workshop space should define a temporary perimeter, to minimise the risk of children with autism from running away, and be clearly structured, as children with autism perform better in well-structured and defined areas.

If the space is not fenced-off, building a **temporary perimeter** will make family members of autistic children feel more relaxed. This can be an "(inter)active" perimeter, incorporating items for sensory play, that not only makes it difficult for children to run away but it slows them down as it captures their attention. The design of this "(inter)active" perimeter is meant to be an opportunity to explore a new multifunctional conception of fences designed to satisfy security and wellbeing requirements at the same time.

A clear spatial structure with well-defined areas

will help autistic children navigate the space, reducing

their stress levels. The perimeter will clearly define the space for the workshop . Within it, it is important to have clearly defined areas and to avoid mixing different types of activities as much as possible, particularly quiet ones from those where there is more movement and noise. There should be heaven areas that are quiet and offer children a space to rest and isolate themselves if they feel tired or overwhelmed, areas for quieter play and others for active play. A clear path connecting the entrance of the park with the access point of the perimeter can also be created to direct the autistic children to the workshop space.

Workshop materials

The design of the temporary elements includes four types of elements. All elements and materials should be safe (structurally stable, no sharp elements, non-swallowable, etc.) and easy to transport.

Mediating materials are a set of materials aimed at creating a connection between an autistic child and other people at the workshop, including both adults and children through sensory stimulation or symbolic play. These include items such as weighted blankets, sensory pillows, see through colourful sheets or blocks, blankets for blanket winging and other items for sensory stimulation as well as dolls. Landsca**pes** are psychomotor circuits made out of numerous movable and/or immovable items, such as wooden pieces or cloth ropes, for children to climb, jump, walk onto, crawl under, slide on, etc. Long linear circuits, where items are distributed following a path, should have multiple entry / exit points allowing children to do the entire circuit or just a section of it. In non-linear circuits, children can go or jump from one item to the other without following a particular path, allowing children to make their own path by going from one piece to the other. Children, and their family

Considerations for the materials

Workshop materials should offer diversity in terms of touch, sound and visual stimulation, fine and gross motor activity and vestibular stimulation. That is to encourage a diversity of body postures (standing upright, on all fours, laying down, sitting, etc.) and movements (walking, running, jumping, balancing, crawling, etc.). members, can modify the landscapes by moving the movable pieces and placing them into new dispositions.

Haven spaces are quiet spaces where children can rest or even isolate themselves from the stimuli of the workshop. There should be quieter spaces where children can sit or lay down by themselves or with their family members, slightly removed from the louder spaces, as well as enclosed small spaces, such as teepee tents or large baskets with pillows where children can get into. Lastly, **rescue materials** are toys or elements that participating autistic children like and that will be kept out of sight and will only be used in the event of a critical situation, such as the child not wanting to enter the workshop space or a tantrum, to make them feel reassured. These objects should be kept hidden from children as they may capture all the child's attention, preventing them from engaging with the rest of play options at the workshop, and only be taken out when necessary.





During the Workshop

Faciliation

Being a performative workshop, it should be kept in mind that the goal of the workshop is to create a structuring, safe and attractive space where different materials and activities are offered for children to play with, rather than establishing a sequence of activities for children to follow. In addition, the response from children and their families cannot be predicted. It is therefore an inductive rather than a deductive process where facilitators adapt the children's actions and responses to the landscapes and mediating materials, following the mental map but allowing for flexibility to adapt to the evolving situation. Adult family members may also assist with facilitation, supporting their children as they feel it necessary.

As families arrive at the workshop, they are welcomed outside the perimeter and invited to enter it, without putting pressure to enter the perimeter and start to play neither making them wait. Children decide when and how to start playing, entering the perimeter by themselves or with someone and choosing where to cross it from, through the "symbolic door" or just going through the perimeter elsewhere.

Once within the perimeter, workshop facilitators

welcome the children in, approaching them without being forceful. Those children who do not show an interest in interacting or playing with the elements of the workshop are given time. Eventually, facilitators may try to engage the child with the help of their family. If necessary, a rescue material, an object that they already know and enjoy, may be offered. Nevertheless, once a child gets their rescue material, family members and facilitators should try to engage the child in order to distract them from this particular object and play with the rest of the elements of the workshop.

In general the facilitators do not interfere with what the children do, unless there is a dangerous situation. They will try to engage with the children without

Setting up

Setting up the space requires time and/or hands and, possibly, a vehicle for transporting materials.

Arrival of the families

Allow for a flexible arrival time to not make children wait, to minimise possible frustrations, and to not overstress the families. If not collected yet, collect all informed consent forms once they arrive

Toys from home

Allocate a space to store toys from home that can distort the dynamics of the workshop or attract the attention of other children and generate conflicts.

Rescue materials

Keep rescue materials out of sight as these may attract children and, once they get it, it will be difficult to separate them from their favourite toys to get them to play with the other materials of the workshop.

Other children and families

Inform other families attracted by the workshop about what is taking place, keeping in mind that the children's autism diagnosis is confidential information and should not be revealed.



Easing transitions

It is important to anticipate the transitions to make them easier to process and prevent frustration. One useful way to do so is the use of visual schedules in which the different activities are presented and give children a sense of time.

Easing the waiting time

Autistic children tend to struggle to understand that they have to wait to play with something when another child is using it. Using visual clock systems can help guide the time children can play with a particular element when other children are waiting for it. Active waiting activities for children to keep busy while waiting for a particular element, such as jumping on consecutive rings on the floor that lead towards the element that the child is waiting for, can alleviate the anxiety that waiting causes.

Dealing with escapism

Some children may want to leave the workshop space or run away. It can be turned into a game and be made part of the workshop. talking, showing them the landscapes and mediating materials and trying to play mirroring or mutual modelling where the facilitator does something for the child to copy from or the other way around, establishing a sort of dialogue between the two. This may however be difficult with those children who are still learning basic imitation skills. Therefore, facilitators should explore various ways of connecting with children, particularly non-verbal ones, including touch and mediating materials. If children start to get restless or bored, the facilitators should introduce new materials, maybe removing others, or some activity that promotes a change of dynamic.

Transitions and sudden changes tend to be difficult for children in the spectrum who rely on routines to navigate social situations. Thus, to ease the end of the workshop easier, a closing game may be created where mediating materials and other movable elements are collected and stored into a big box or sack. A convivial farewell moment with food and drink can also help end the workshop.

Data Collection

General data collectors mapping what children do will, ideally, only map one child each. It is therefore recommended that the workshop is recorded, with permission of all participating families, to map children for which there was no data collector. The video, which should only be used for research purposes to ease family permissions, will also be useful to verify the collected data if need be.

Autism experts can follow up to three children each and should do so during the workshop as it is difficult to gather this information from a general video.



Ending the workshop

It is very helpful to set an end time for the workshop and to keep track of time in order to introduce new materials and remove other ones before it is time to start collecting. This will allow facilitators to try different types of materials and activities without having everything out at the same time, guiding a bit what happens during the workshop and avoiding overstimulation.

After the workshop

Making discussion sessions accessible

Use language and images suitable for those who are not experts in autism and/or public space design. Make the discussion sessions short, at a time when families can attend, and in a conveninent location for them. If possible, at the space to be transformed itself.

Allowing participants to prepare the discussion sessions

Send a summary of the results and the topics to be discussed before the discussion session so that they can be shorter without compromising their success.

Collecting data about the children's emotions and play preferences

Immediately after the workshop ends, a survey should be sent to all the participating families with questions about how their children felt during the workshop and what they liked best. Other questions may also be included.

Data analysis

After the workshop, the three sets of data will be analysed independently and the results will be studied together. Data about what children do during the workshop should be digitised into a single file, overlaying all the information into a single map with a different layer per child. This will show what items and spaces have gotten the most and the least attention, and the senses stimulated the most. This information should be contrasted with the responses from family members about their children's emotions and play preferences to ensure that the elements that got the most attention are those that actually they liked best.

Lastly, autism-specific data should be analysed by autism experts following the chosen standardised method. This information will show the autistic children's performance for each of the analysed abilities (e.g. social interactions, imitation and play skills) during the workshop. This analysis will show whether the support elements introduced through the workshop, such as visual clocks and pictograms with instructions about how to use a particular play element, and the mediating materials and landscapes help children improve the studied abilities or not. Nevertheless, this will only be possible if there is a baseline to compare it to. Therefore, families of children in the autism spectrum should be asked if they have a diagnostic, what standardised method that was used for it and whether they would like to share the information with the project team. Otherwise, two workshops should be held: The first one without introducing those elements that the research team wants to verify through autism-specific data to have a baseline and the second one with these. If this is not an option, information about autism-specific dimensions should be asked to family members, who will be able to confirm whether the introduced changes help their children perform better in certain abilities or not.

The results from the three sets of data should be studied together to make decisions that inform the design of the space.

Verification sessions

The project team should organise a verification session to share and discuss the obtained results and their decisions about the design of the space with the participant families, or other families of children with autism who regularly use the space to be transformed. It is also recommended to invite experts in autism and playground design to the discussion.

ASD Publics

Activating Spaces with neuroDiverse Publics