



PLAY FOR ALL

Universal Design for Inclusive Playgrounds

Content

Universal Design for Inclusive Playgrounds

INTRODUCTION

World views on equality in play	3
Timeline of inclusive playgrounds	5
Inclusive and thrilling playgrounds with universal design	6
KOMPAN's universal playground design	8

CASES OF UNIVERSAL PLAYGROUNDS

Flag Pole Hill, Dallas, Texas, USA	10
Children's Epilepsy Hospital, Filadelfia, Denmark	12
Frimley Lodge Playground, Surrey, England	14
'Piece of Good Fortune' Playground, Cologne, Germany A	16
Mungret Autism-friendly Playground, Limerick, Ireland	18

EXAMPLES OF UNIVERSAL PLAY DESIGNS

KOMPAN's universal play equipment design points	20
Spin and Swing	22
Sway and Rock	24
Dramatic Play	26
Exploratory Play	28
Combination systems	30
Ramp structures	32

RESEARCH

KOMPAN Play Institute research	34
--------------------------------	----

Publisher:
KOMPAN Play Institute 2020
Ed. Jeanette Fich Jespersen

Observation, test and production teams: Suzanne Quinn, Stine Magnussen, Nicolai Mai Bentsen, Mads Dreyer, Joan Pedersen, Allan Hansen, Mia Andersen, Kirsten Rantzau, Jeanette Fich Jespersen.
Many thanks to KOMPAN's sales worldwide, in particular: Mercedes Rodes, Spain, Justin Edwards, Asia, Uwe Lersch, Germany, Keith Walker, Ireland, Thomas Gislinge, Denmark, for invaluable input.

Special thanks to:
The Kindergarten Platanhaven, its children, teachers and principal Charlotte Louise Madsen.
The school Nørrebjergskolen, the school's pupils, teachers and parents as well as principal Simon Borup Andersen and educational manager Inge Vester.
Inga Friis Mogensen, who chaperoned KOMPAN Play Institute's early initiatives in the field of universal product design and tests involving children with disabilities and who has been a most helpful consultant for decades.

Dr Katherine Bishop, senior lecturer at University of New South Wales, Australia.
Fiona Robb , Landscape Architect, advisory group of New South Wales new policy on inclusive play.
All the cities, organisations, individuals and architects who have made it their mission to create inclusive and universal playgrounds.



Universal design and the United Nations Declaration on the Rights of Persons with Disabilities

Most nations have signed the *United Nations Declaration on the Rights of Persons with Disabilities (2006)*. The declaration recommends a universal design methodology as the most efficient way of ensuring equality of access to and use of public services and facilities. Universal design is design that welcomes all users, regardless of their disabilities and abilities, in one solution. Universal design implies an inclusive approach to public planning: that everyone should be able to access and use public services and facilities. Basically, no person is disabled, but the environment may be disabling in its design.

World views on equality in play

“The underestimation of the abilities of people with disabilities is a major obstacle to their inclusion and to the provision of equal opportunities”

The State of the World's Children, 2013, Children with Disabilities, UNICEF 2013

Children with disabilities, just like all other children, love the thrill of physical play, and the joy of playing with others. This is the main consideration to bear in mind when planning inclusive playgrounds. We should never underestimate the abilities with children with disabilities. And playgrounds should be planned accordingly.

Equality in play

Creating equal possibilities for outdoor play is a main obligation for communities. This implies access to playgrounds for all, including children or parents with disabilities. Children with disabilities are under-represented in all leisure pursuits, mainly due to a lack of accessibility. In playgrounds, many struggle with implementing according to the guidelines – or they don't even have guidelines.

The aim of this publication is to help create truly usable, inclusive play spaces that are thrilling for all. Accessibility is crucial, but may be the easiest box to tick. Designing universally including playgrounds with

the right equipment can be more challenging. Very specialized play designs may stigmatize rather than include. Accessible designs may lack in play value. Striking the right balance is the trick.

Why plan universal playgrounds?

Everyone benefits from playing together – across ages, genders, nationalities and abilities. Studies show that children with disabilities who play with typically developing children grow and develop their understanding of their own abilities and strengths and gain a positive self-image. For typically developing children, direct contact with peers with disabilities has a positive effect on their empathy and tolerance. Play solutions for all make it possible for all children to interact. This decreases loneliness and fear of contact.

It's in KOMPAN's DNA to make universal design

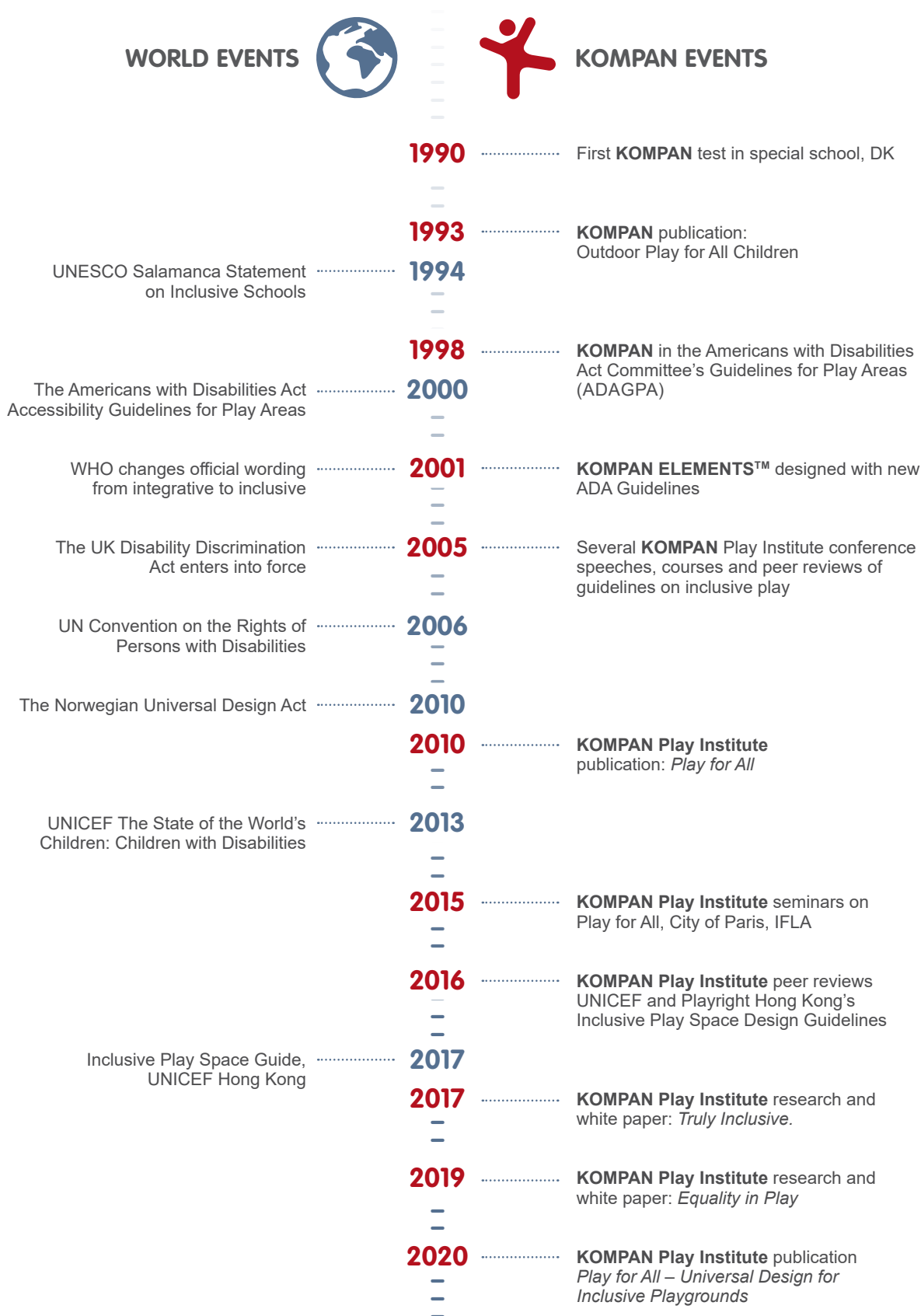
KOMPAN has more than 40 years of experience from designing play solutions for all, including children with disabilities.

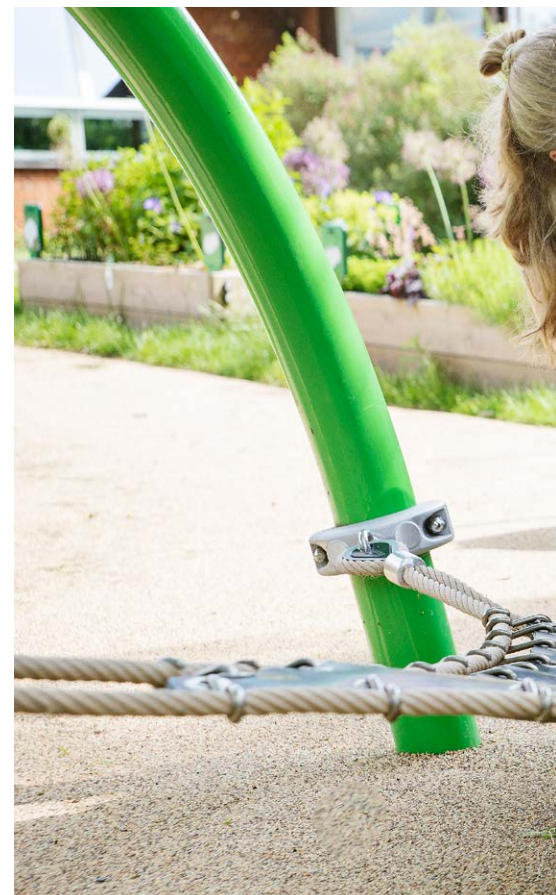
Over the past years, the KOMPAN Play Institute has intensified its observation studies and revisited the core insights of universal play. In this publication we have collected some of these observations to share insights and new research on accessible, inclusive and universal play equipment and playgrounds, while also presenting a number of recommendations for planning. Focus on usability, thrill and play relevance makes the playgrounds great.

Enjoy!



Timeline of inclusive playgrounds





Inclusive and thrilling playgrounds with universal design

Usable designs that unite in play

An important intention of the United Nations' Declaration on the *Rights of Persons with Disabilities* is to make public services and facilities equally accessible and welcoming for all citizens. It is called inclusion. The mission of inclusive play is to unite everyone and all abilities in play.

Inclusion vs. integration

Inclusion is a term coined during the 1990's. It replaced the term "integration", as "integration" suggests that individuals who are not like the norm are kept and treated in special units. The term "inclusion" suggests that there is no one norm, but many norms, and we all contribute to and benefit from society in varying degrees throughout life. The focus of the term inclusion is on what people can do, not what they cannot do. The illustration, based on the UNESCO Salamanca Declaration, says it all:

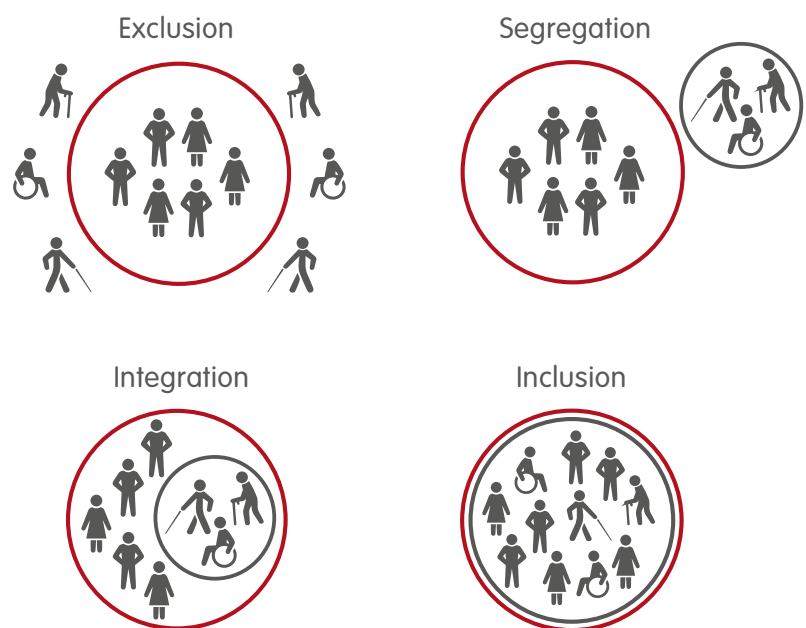


Figure 1



When people are excluded, they are left out of society and not catered for. When people are segregated they are left and catered for outside of society. When people are integrated they are taken into society but in special, closed units. When people are included, they are invited into society on equal terms, with due consideration of their individual needs.

Accessible and inclusive playgrounds

An inclusive playground is accessible. This means that all users, regardless of disabilities, can get to and use, to the widest possible extent, the play facilities, together with others. An accessible playground has paths and surfacing that can be accessed by all, including e.g. wheelchair users. The paths should lead up to and around equipment to allow choice of routing and break points across the playground.

Is your inclusive playground usable?

The play equipment should be varied: in an inclusive playground everyone can play something. Not all can necessarily do everything, but all can do something. So

play equipment must offer fun, meaningful play experiences for all.

The KOMPAN Play Institute researched the usability and points of interest for children with cognitive and physical disabilities. Based on play observations and teacher interviews, the conclusion was, that children with disabilities want thrill, too.

The main success criteria are that the play equipment is worth the children's while. That there is a reward at the end of the work for getting into the play piece. It could be physical thrill, e.g. from movement response, height or speed. Or it could be the social reward of being with friends.

Universal design

The term universal design and its design principles were developed in the 1990ies by practitioners. It is a widely acknowledge way of working with environment and product design.

There are 7 principles of universal design:

1. Equitable use
2. Flexibility in use
3. Simple and intuitive to use
4. Perceptible information
5. Tolerance for error
6. Low physical effort
7. Size and space for approach and use

*Seven Principles of Universal Design
(Ron Mace et al, 1997)*

KOMPAN has designed for and with children since the 1990s

KOMPAN has engaged in tests and development with children with disabilities since the early 1990s. The first publication on play equipment for children with disabilities was published in 1993: *Outdoor play for all children*. The philosophy of the publication is still fundamental for KOMPAN's design philosophy of play for all: "All children can do more than we think"

KOMPAN's universal playground design

Accessibility, inclusion, universal design and usability

An accessible, inclusive and universal playground design should take into consideration the widest possible range of users: children with and without disabilities, parents and care givers with and without disabilities. Showing consideration for all users also means taking account of physical, cognitive and sensory abilities and disabilities.

Accessibility

Accessibility is a minimum requirement. This means access for wheelchairs and walkers, and firm pathways to play activities. Avoid curbs, edges and other obstacles for access.

Inclusion and universal design

To cater for a range of users requires a playground infrastructure offering multiple ways of access, e.g. hills with a gradient that is not too steep.

Functional division

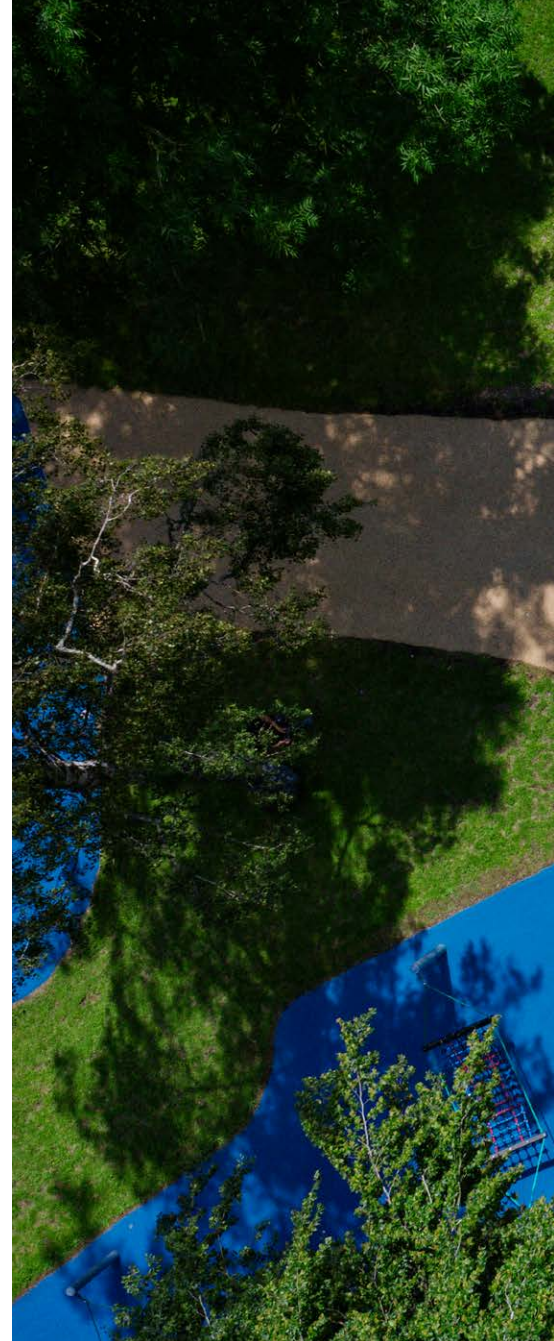
Remember users with cognitive or learning disabilities: Boundaries between activities and transition areas can be highlighted using different colours or material textures in the surfacing. For children who are hy-

per sensitive, add clearly marked areas for retraction. Last but not least, the location of the play area has a big impact on ease of accessibility: nearby parking, public transport options and lavatories increase the possibilities of use for a wide variety of users.

Usability

The play equipment should be usable: Usability means that the widest possible number of children and adults with and without disabilities can use the play equipment themselves. They may not be able to enter themselves, but once in the equipment, they can use it themselves. Last but not least: remember adults in the playground. They may have disabilities, too. Benches and seating options, with back support, and tables, make possible a break.

All users should be able to find thrill in play in an inclusive playground.



Universal playground design points

1 Accessible, inclusive routing and infrastructure

- Accessible surfacing to and around activities
- Clear design signals, possibly signage
- Provide alternative accesses and exits to the play area and the play equipment: Make boundaries, fencing and hedges that allow for visual and physical access. Avoid kerbs, narrow entrances, high door knobs

2 Access to relevant ground-level activities

- Accessible surfacing around play activities, e.g. spinners, swings, sand play items etc.
- Scan for varied access possibilities into/onto play activity
- Scan for support of varied body positions in/on play activity

3 Access to relevant elevated-level activities

- Consider access and egress motivation and possibility of elevated-level activities
- Consider the thrill levels achieved on elevated level
- Consider the social benefits of elevated level



4 Support thrilling and challenging play

- Offer activities that 'thrill and tickle the stomach': spinning, swinging, swaying, bouncing, gliding, sliding
- Offer graded play challenges – activities that are easy and/or harder to master
- Offer variations of thrill: physical, social, cognitive as well as sensory: stimulate the senses of touch, hearing and smell

5 Support social interaction

- Offer activities that can be undertaken together with others
- Offer 'two-of-each' parallel play options for training social skills
- Work with transparency in playground and play equipment designs to support visual contact in play and possibility of interaction between levels and distances

6 Variation in play activities

- Provide wild as well as quiet activities
- Provide physical, social and cognitive-creative activities
- Provide room for breaks, seating and for retraction from play

LOCATION INFRASTRUCTURE



The Supernova is super thrilling spinning fun for all.

Flag Pole Hill, Dallas, Texas, USA

Unique designs help children of all abilities to play longer, together

- Transparent and open design provide opportunities for children of all abilities to be at the center of the play
- A variety of play activities helps to enrich and extend the play
- Sensory & tactile stimulation is supported with equipment that responds to the child
- Clear sightlines help children and families to feel comfortable in the play space

Designed for graded play

Flag Pole Hill is a 107.1 acre metropolitan park, established in 1929, located near to White Rock Lake in Dallas, Texas, USA. Flag Pole Hill had a small playground area that was not visited often, and in need of a refurbishment. In 2014 a non-profit organization called For the Love of the Lake (FTLOTL) became involved in the project, and in consultation with the local community and other organizations, they advocated for the renovations to the playground to focus on inclusiveness in the design. Extensive research was conducted with families of children with disabilities in the local area. The findings highlighted how families wanted a playground that was exciting, and would help their children to be at the center of play with all of their peers¹.

These community needs were met with innovative KOMPAN play solutions that incorporate principles of Universal Design. Here, all children can spin, climb, rock, glide, make musical sounds and swing in a beautiful environment with great routing and infrastructure that provides access for all and supports a flow of activities. At

Flag Pole Hill open design and ground level play are abundant, and there are a variety of play activities for all to enjoy and challenge themselves. The attractiveness of the play area makes people say WOW! and this brings people together in play. But it is the intentional design features that such as multifunctional spinning pieces, multi-pathway rope climbs, a high capacity see saw and the tactile toddler equipment that keep people satisfied with the experience so that they will stay longer and return again and again. The delight is in the details!

The Explorer Dome and the Boomerang are perfect examples of structures that are designed to invite all to play, together, with inclusion in mind. The open design and multiple entry points provide access for all children, with graduated challenges for children who are working on their motor skill development. A special feature of the design is the open access at ground level. This allows children with a mobility disability to join in the thrill at their own level of comfort, and they can be at the center of the play with others. The multiple social

points around the structures invite children of all abilities to play and strengthen their bodies. In fact, a playground that is social and challenging will be the greatest asset of all to children and families who have disabilities because it will invite everyone to recognize the strengths and assets of all people.

Our post-occupancy research of this playground found that visits to the park increased after the refurbishment of the space and that people who visited the playground stayed on average, 60 minutes for a playtime. The 60 minute play time is encouraging, as this is the recommended amount of time for physical activity for children ages 5-17².

Children and their families flock to the Flag Pole Hill All Abilities Playground, and enjoy play by having many opportunities to create play stories and games, all the while exercising their bodies and enriching their minds. The playground at Flag Pole Hill is a truly special place that attracts all people.

¹ Hasan, H (2016) *Universally designed playground needs assessment for Flag Pole Hill*. MS Thesis, University of North Texas

² US Health and Human Services (nd) *Physical Activity Guidelines for Americans* <https://www.hhs.gov/fitness/be-active/physical-activity-guidelines-for-americans/index.html>



The Explorer Dome provides open access at ground level and many ways to climb and socialize.



The Boomerang is high capacity and offers graded challenges, accessible from ground level.

LOCATION INFRASTRUCTURE



The colorful playground goes all the way around the hospital.

Children's Epilepsy Hospital Filadelfia, Denmark

The Epilepsy Hospital Filadelfia specializes in therapy for children with epilepsy and sequelae

- 123 pieces of inclusive play equipment carefully selected to vary play for children of all abilities
- The playground gives the children and their families a natural environment outside the clinical environment of the hospital
- The playground gives doctors and nurses a new way of observing children
- Divided into zones with various types of play activities to make sure all children are included in the play

Therapy and play hand in hand

The Epilepsy Hospital Filadelfia is one of a kind in Denmark. The hospital holds the country's expert knowledge and specializes in diagnosing children with epilepsy and sequelae. In 2018, the hospital was granted a gift from the Danish Maersk Foundation to establish a large, outdoor playground surrounding the hospital grounds. The playground was built to provide a natural environment outside the clinical environment for the children to play and use their senses, and to give doctors and nurses a new way of interacting with the children.

The impressive new play area holds nothing less than 123 inclusive pieces of play equipment, carefully selected to offer play for children of all abilities. The children coming to the hospital are between 6 months and 18 years old and have very different levels of epilepsy and very different abilities. Therefore, the playground is designed using various types of play activities that are divided into zones to make sure all children are included in the play.

A large number of children with epilepsy doesn't get physically challenged in their everyday life due to the illness. The new playground includes children of all abilities and encourage them to forget their illness for a moment and play! Play equipment like wheelchair swings, and



The playground is divided into zones with various types of play activities to make sure all children are included in the play.



The different play features allow the kids to play together.

ramp structures make sure that all children are included in the play. The playground has made it possible for all children to play with each other which was something they were not able to do before. The many play opportunities on the playground show the children and their families that life can be both active and playful despite of chronic disease.



Accessible sand play solution.



Family friendly park draws families from afar.

Frimley Lodge Playground, Surrey, England

The Frimley Lodge Park has a variety of activities and there is guaranteed to be something for everyone

- DDA friendly*
- Play for all ages, fully inclusive
- Equipment for all abilities
- Large, popular site, which is family friendly
- The site is now a destination playground for the local area and beyond

* Disability Discrimination Act

Project Brief

The brief included a large centrepiece play structure to cater for children of all ages and abilities to play on together. A double zip wire was requested to provide the children with a racecourse where they could challenge each other and push their confidence levels. Carousels offering children of all abilities social and physical play while lying, sitting or standing were suggested; particularly suited to those facing physical challenges.

Project Process

Children at nearby schools have played an important role in choosing the playground. The children were asked to pick out their favorite solutions, and in the end KOM-PAN's was the children's clear favourite! The playground is also a huge hit with parents as the open layout allows them to keep an eye on their children from almost every point in the park.

Result

The play area is now the destination playground in the surrounding Surrey Heath area: it truly is a playground for the whole family – children want to come back time and time again.

The Mega Deck Castle Tower ticks all the boxes, offering various play activities and includes cannons and treasure boxes to enhance imagination. A large climbing net makes for a challenging entrance and the

imposing curved tube slide offers a thrilling ride, for those who dare! The Double Cableway is always a hit where the children race each other to the end, great for social-emotional skills such as cooperation and turn-taking. The Inclusive Carousel with its ground level wheelchair access has also made the play area accessible to children of all abilities, enabling them to interact and play with able-bodied children.

The playground is also popular with parents as the open layout allows them to keep an eye on their children from almost every point in the park whilst sitting on the surrounding picnic tables.

Play for all ages and abilities

The playground's castle offers children a multitude of play activities that stimulate both their physical and cognitive skills in a fantastically varied play structure with cannons and treasure boxes. The castle has an entrance which makes it possible for children of all ages and abilities to play on it. However, it also has a climbing net, that makes for a more challenging entrance. The thrilling tube slide helps children develop their spatial awareness, and the double zipline provides the children with a racecourse where they can challenge each other in reaching the end first. The zipline helps develop children's social-emotional skills, such as cooperation and turn-taking. The tipi



The wheelchair carousel makes the playground fun for all abilities.



Adventure for all ages.

carousel provides children of all abilities with social and physical play while lying, sitting or standing; perfect for those facing physical challenges. The wheelchair carousel makes spinning around available to everybody; the spinning movements help to train the senses about balance and spatial awareness.

LOCATION INFRASTRUCTURE





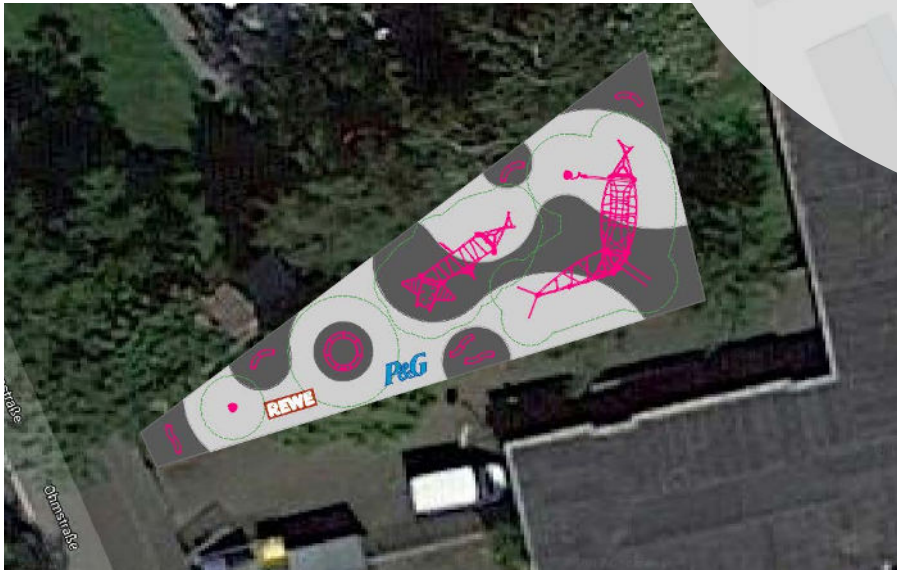
'Piece of Good Fortune' Playground, Cologne, Germany

A Great Universal Play Design

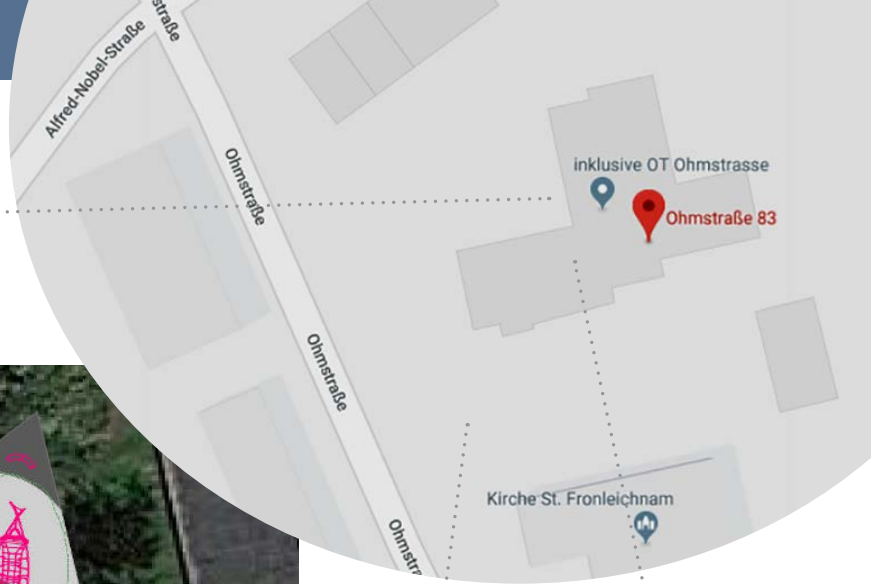
- Location close to housing
- Amenities such as a café and lavatories
- Richly varied ground-level activities
- Transparent layout to facilitate orientation
- Ample space for relaxation and breaks

Playground

LOCATION INFRASTRUCTURE



Plan drawing



Parking space available

Inklusive Offene Tür
Ohmstraße 83
Köln Porz

"Inclusion means that every person belongs. In an inclusive playground, all children – with and without disabilities – are welcome. All children can have fun and get to know one another through play. Everyone benefits from that: when inclusion is lived out from early on, our children will grow up without barriers in their mindsets."

Aktion Mensch (meaning human action), is Europe's biggest fundraiser for people with disabilities. One of its important missions is to make Germany more inclusive, especially in the playground area. The organisation found that there was a lack of inclusive and accessible play areas.

This started a fundraising initiative in cooperation with Procter & Gamble (P&G), the REWE chain of grocery stores and Aktion Mensch, 'Stück zum Glück', (meaning piece of good fortune). Over a period of three years, 40 inclusive playground projects are planned across Germany. The first playground opened in June 2018 in Cologne.

The 'Piece of Good Fortune' playground in Cologne focuses on what older children can do, not what they cannot do. Taking this as the starting point of your planning means identifying common traits of play. All activities have the potential of both tickling the stomach and offering opportunities for social interaction. Play activities are based at ground level or accessible

from ground level, thus enabling for the inclusion of older children with physical disabilities.

There is a choice of dynamic activities, such as bouncing, swaying, spinning and rocking activities, as well as stable activities. All the activities facilitate thrilling play and social interaction. The transparency of the playground makes it easy to get an overview of the playground, navigate around it and, not least, communicate with friends.

Not everyone may be able to do everything, but everyone can do something. And most definitely, the playground succeeds in motivating everyone to play – together.



"And most definitely, the playground succeeds in motivating everyone to play – together."

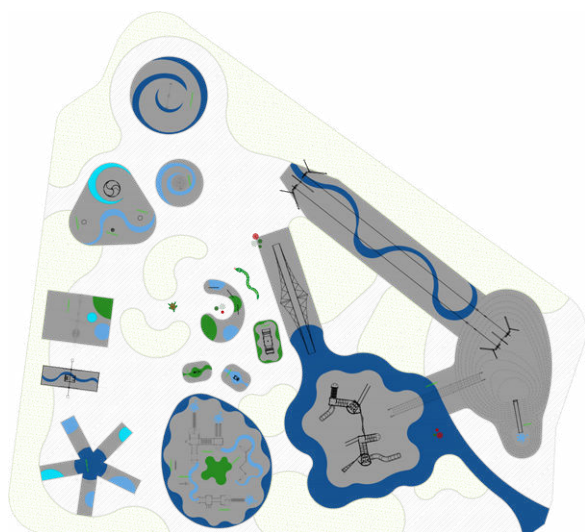


Mungret Autism-friendly Playground, Limerick, Ireland

Signalling Play for All

- Signage assists children with autism
- Quiet retraction areas are provided
- Plenty of balance-stimulating ground-level activities, including a wheelchair-accessible carousel
- Varied bridges and sloping surfacing provide variation in levels for all

LOCATION INFRASTRUCTURE



Plan drawing



Designed with help from Autism Ireland

When cities plan for universal design and inclusion, mobility impairments are often the centre of attention. However, planners are increasingly considering the usability of playgrounds for people with cognitive and social-emotional disabilities also, as the number of children diagnosed is growing. In the USA, the Center for Disease Control and Prevention estimates the prevalence of autism to 1 in 88 children. In Mungret, Ireland, Liam Mulcahy, founder of Sophie's Journey Foundation and the father of a girl with disabilities, has initiated an amazing autism-friendly playground. With guidance from Autism Ireland, the city council of Limerick and KOMPAN Ireland, a playground design that welcomes users of all abilities, and particularly children with Autism Spectrum Disorder, has been realised.

The playground has ample parking as well as lavatory facilities. The infrastructure of the playground includes surfacing with clear routing guidance. Families can enter from the parking areas either straight into the toddler area or into wilder activities in the section for older children, or they can enter from the park. The playground is fenced to create a sense of security for families and children, who feel confident knowing the boundaries of the activity areas.

The surfacing signals are consistent, having circular signs around spinning activities, and the boundaries of all activities are highlighted with a contrasting colour in the surfacing, to let children know when

they are entering a play activity area. Some of the area is undulating with small hills, adding to fun balance and spatial stimulation when children play. These motor skills are important for all children, but in particular for children with autism. Additionally, children who use wheelchairs like to have challenges going up or down slopes, adding thrill and challenge.

There is a variety of ground-level activities, including different ways of spinning. These are pooled into activities that enable social interaction without direct physical contact, e.g. multi-seesaws with big platforms, and groups of spinners or springers that face each other. A variety of swinging options are pooled together, including a wheelchair-friendly swing. The various sections of the playground are connected by bridges, again designed for varied levels of difficulty and wheelchair usability.

The playground layout and activities are designed to accommodate children with autism. But through considering users with a range of disabilities, the result is better for everyone. In Mungret they now have a truly fun, truly inclusive state-of-the-art playground for all.

Play considerations for children with autism

Children with autism respond differently to sensory input than typically developing children. There are, generally speaking, two reactions to sensory input.

With under-sensitive users,

"encourage activities that help develop the vestibular system. This can include using rocking horses, swings, roundabouts, see-saws, catching a ball or walking smoothly up steps or kerbs". As for body awareness, under-sensitive users tend to have difficulties with boundaries. This can be helped by highlighting the boundaries, or by clearly marking where activities start and stop, e.g. through the consistent use of safety surfacing colours to help children navigate.

With over-sensitive users,

avoid activities that are hard to stop. Likewise you should choose activities where the head is upright and the feet on the ground. As for body awareness, you can help by encouraging fine motor activities, such as manipulating small objects, e.g. lacing boards.

* National Autistic Society in the United Kingdom, www.autism.org.uk

KOMPAN's universal play equipment design points

KOMPAN considers the widest possible scope of abilities and disabilities in inclusive, universal equipment design. The challenge designing for children is that their size, abilities and play preferences change as they grow. Universal play design should not compromise age appropriateness. But some users grow their bodies faster than their minds and may find early childhood play items attractive. In KOMPAN designs, play structures are often open to the sides and to the top, to allow for all sizes and for care givers.

Rewarding physical thrills

Thrill is a major success criterium for play for all children. Play equipment that responds back to movements, such as spring, spin or sway equipment, is hugely popular with most children. Tactile items that can be shifted, turned and explored are intriguing and stimulate logical insights, talks and imagination.

Equipment for users with disabilities

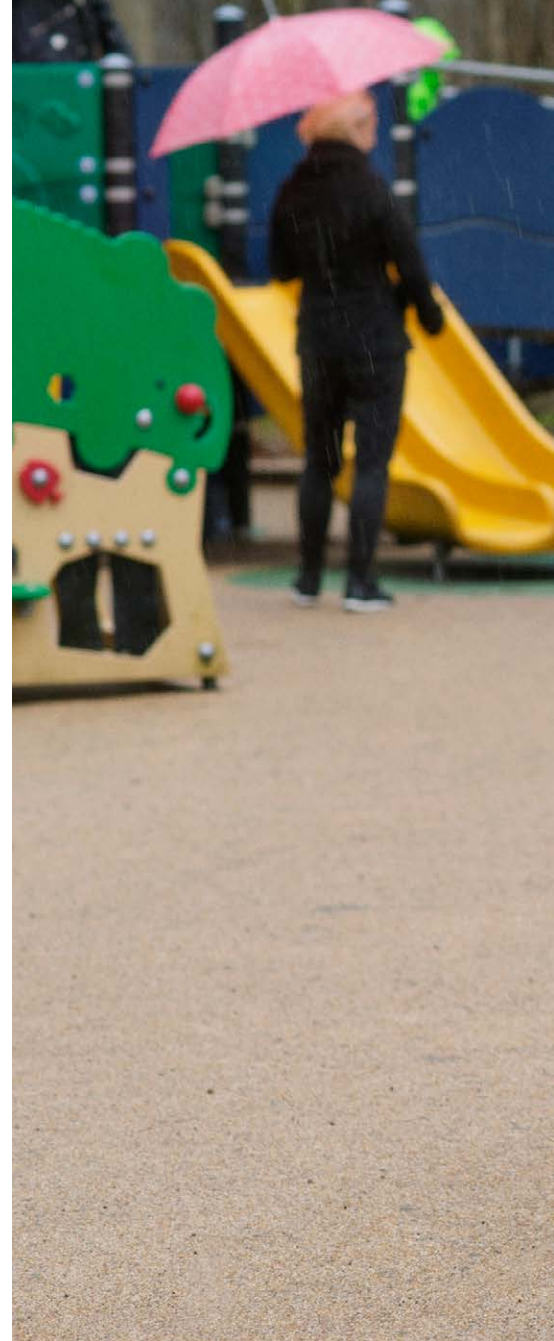
Some children cannot get out of their wheelchair independently. They most often want physically thrilling play, too. Activities

that children can lie or sit in or on, to experience physical response and movement, e.g. horizontal spinners or hammocks, will bring joy. For those who cannot leave the wheelchair, activities such as slopes to drive up and down, or carousels to drive onto, add great fun to the play.

Involving children of all abilities in play equipment design

Adults may think they know what children find playful. Whether based on childhood memories or textbook knowledge, adults ever so often get it wrong, though. KOMPAN, after 40 years of experience within the field of inclusive design, still tests with children with disabilities as well as typically developing children to create child-approved, thrilling play equipment for all.

Multifunctional, responsive and thrilling play at ground level.



Universal play equipment design points

1 Ground-level usability

- Interesting activity offered at ground level or from ground-level access point

2 Responsive or thrilling

- Physical: responsive and/or stomach-tickling, e.g. spinning, sliding, swaying, bouncing
- Social-emotional: motivates and facilitates social thrill or interaction
- Cognitive-creative: manipulative elements, sound, tactile or visual variety, explorative play items. One of these points, as a minimum, should apply to the play equipment

3 Play from all sides: 360-degree design

- No rear sides: equipment can be entered from more sides
- More than one entrance and exit



4 Two-sided play activities on play panels

- Panels offer activities that can be used both from the inside and the outside, to engage children on both sides. This enhances and motivates social interaction

5 Transparency in design

- Clear colour and design signals. This supports orientation for a range of users.
- Transparent to the widest possible extent. This facilitates communication through, in and around equipment

6 Multifunctional whenever possible

- Offers use with varied body positions
- Is equipped with several challenge levels
- Offers different play options at activities, e.g. a play panel next to a slide entrance. This enables different kinds of play contributions: everybody can engage in something



Spin and Swing

Spinning, rotating and swinging train the sense of balance and the spatial awareness. These are fundamental for a wide scope of other motor skills. The training of the sense of balance is important for all children. It is particularly important for children with autism, vision impairments or a range of physical disabilities. The following swings and spinning items are all good, universal design. They are accessible and usable by all, from ground level.



Physical



Social



Cognitive

TIPI CAROUSEL WITH TOP BRACE

ELE400065

Top frame

adds good support for standing, rising, holding tight, back support

Spacious platform

with sides allows for various body positions, seated, lying, standing and for multiple users



Side supports

ensures good grip for pushing, pulling or holding tight

Shallow entry supports

easy on-and-off for children with physical impairments

WHEELCHAIR CAROUSEL

PCM157

The spacious platform

- holds many users with or without assistive devices, to spin and play together



Handrails and side poles

Make easier pushing and pulling and support standing or sitting

The wide entrance

allows space for assistive devices and wheelchairs

The bench

is placed for easy entry/exit for less confident or physically agile users

BIRD NEST SHELL SWING SEAT

SW990091

The spaciousness supports varied body positions, seated, lying, standing, and allows more users

Rubber bumper

ensures a nice, tactile grip and prevents users sliding out



The shallow seat facilitates transfer

SUPERNOVA

GXY916

Open design means multifunctionality

- Children can play pushing or being pushed, lying, seated, standing, alone, together, and different ages and abilities
- Assistance and supervision are easy, from both sides
- Easy to get on and off

The low and high end below 60 cm allows users of all abilities to access and use



The division into ring sections designates personal space for users who need that

The round shape allows assistance all over

The grooves support grip

SPINNER BOWL

ELE400024

Multifunctionality

- Can be turned by own body movements or with help from friends or care givers pushing
- Can be pushed also from a wheelchair position

The open design allows for assistants



Supportive sides when seated

supports a wide spectre of mobility impairments due to the height of it



Sway and Rock

Swaying trains the vestibular system as well as the understanding of cause and effect. Apart from being great fun, rocking trains crucial motor skills such as the sense of balance. This crucial motor skill helps the child, for instance, to sit still on a chair. The following swaying items are examples of good universal design: they can all be accessed and used from ground level.



Physical



Social



Cognitive



Creative

HAMMOCK

PCM804

The soft rubber seat
supports seated positions as well as
lying on the stomach. For young children
it supports lying on the back also

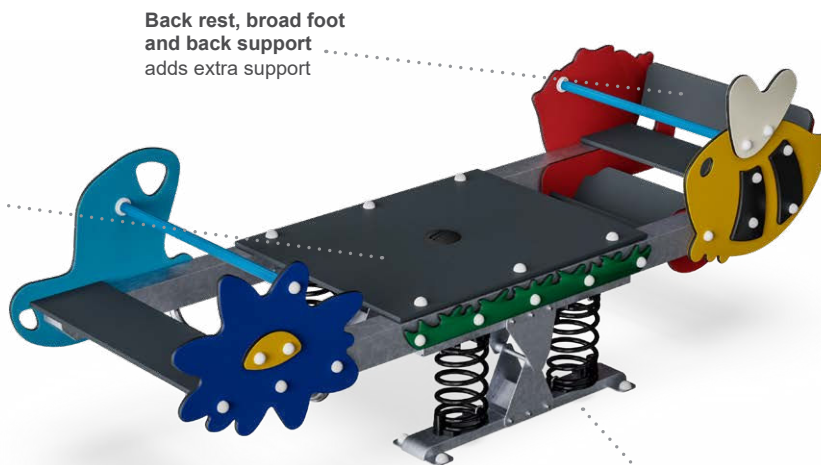


The swivel and short chains
allow gentle swaying

MULTI SEESAW

M18671P

The broad platform in the middle supports a range of body positions, lying, seated, standing. It is splendid for children who can only lie, and for adults initiating or supervising play or holding a child



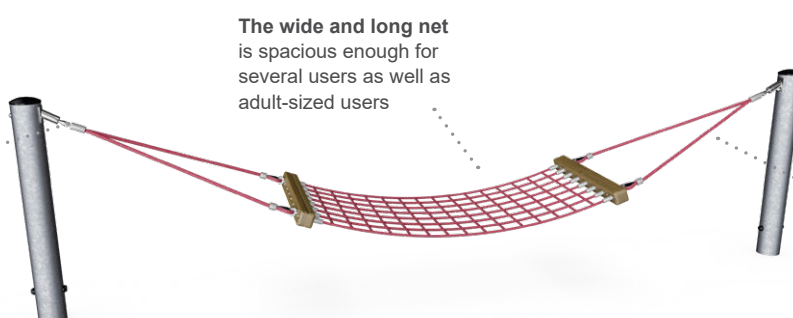
Back rest, broad foot and back support adds extra support

Rocking movement adds to spatial awareness and sense of balance. Children of all abilities can enjoy milder and wilder rides here

ROPE HAMMOCK

COR20502

The swivel point enables both gentle and wild sways



The wide and long net is spacious enough for several users as well as adult-sized users

Ropes ensure a good grip for swaying the net

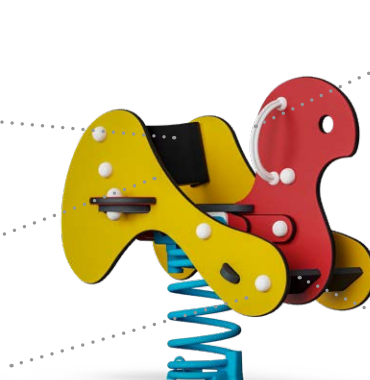
CRAZY GANDER

M106

The soft back rest has been developed to add soft, extra back support

The closed sides in seated position ensure side support where the child is seated

Low sides in front facilitate transfer in and out of the Crazy Gander



The vertical handgrips ensure a firm grip at different heights

The broad foot and calf support works for children with walking disabilities, as well as for all other children

MOVABLE HAMMOCKS

PCM701

Firm seats to add variation in tactility and seating options

Hammocks can be pushed sideways to be closer or further apart

Soft wide hammock seats support users lying or seated





Dramatic Play

Dramatic play is a driver of numerous imaginative play scenarios. It is a great trainer of language and communication skills as well as cooperation with peers. The best themes are often recognizable from everyday life, yet opening a door to the outer world: animals, journeys, houses and castles tell a whole story in their own right.



Physical



Social



Cognitive

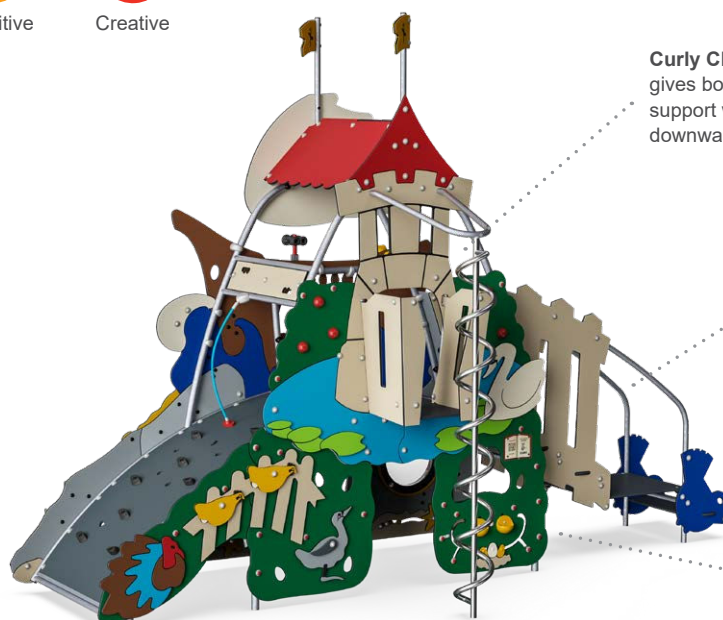


Creative

LITTLE MERMAID & UGLY DUCKLING, ADA STAIRS

MSC6430

- **Animals and fairytale themes** spur storytelling
- **Open design** allow carers to interact with children in eye height
- **Curved climbing wall** adds an extra open point for carers to assist children in and out of the design



Curly Climber
gives both grip and seat support when rotating downwards

Accessible stairway
aids children with side support and grip holes in steps

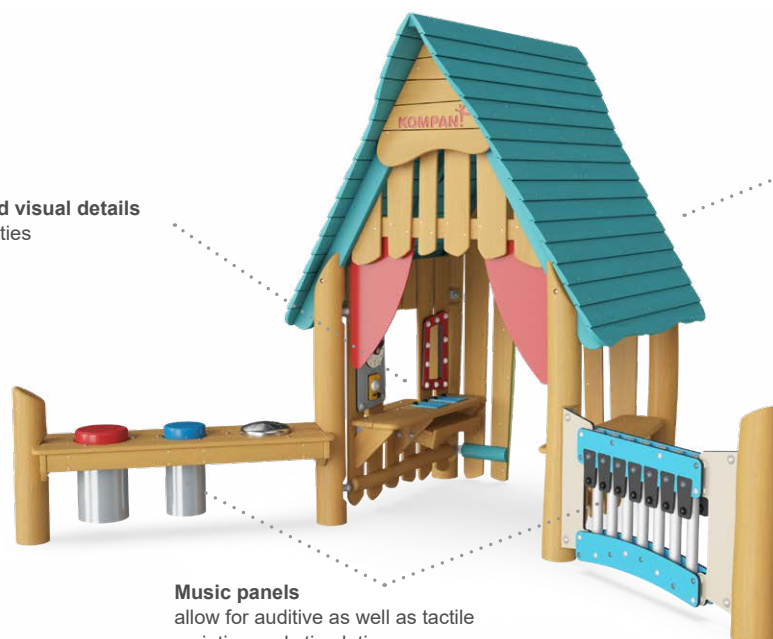
Ground level responsive and tactile play items
afford for play between children inside and outside the den under the deck

THEATRE & MUSIC COTTAGE

NRO606

Richness of varied tactile and visual details
allow for exploration for all abilities

Open design
of the house sides allows
for play all over, from all
sides, for all abilities



Music panels
allow for auditive as well as tactile
variation and stimulation

PLAY & LEARN COLLEGE

NRO611

Blackboards on both sides
makes panel accessible and
usable all round

**Varied responsive
tactile details**
support themes for
playing school

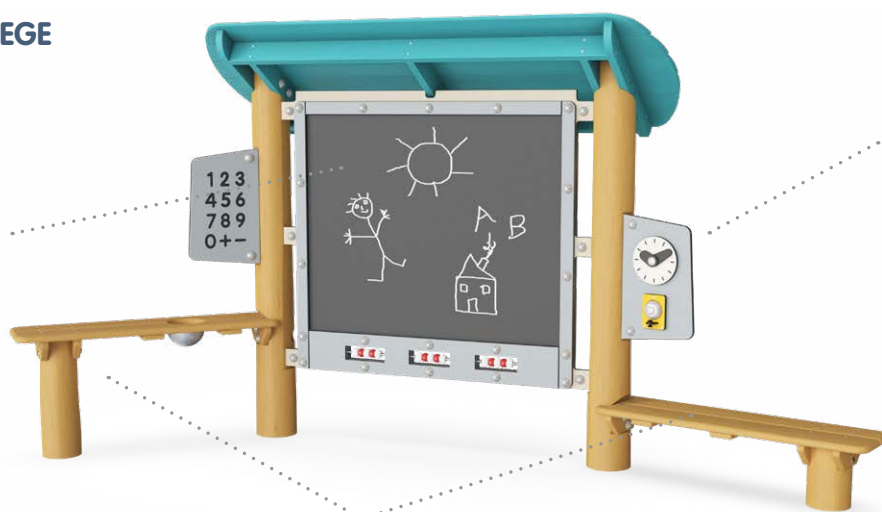


Table and bench
are approachable from all sides
and provide seating for care givers

GAS STATION WITH 2 PUMPS

NRO513

Petrol station
is accessible and
usable from all sides

Theme of traffic
is easy to relate to and
spur conversations and
play with peers



Petrol handles
are placed in a height that
can be reached by all



Exploratory Play

Exploratory play is spurred, and curiosity aroused with changeable, responsive play items. Play items that the child can affect: shift, alter, perhaps even change. Sand, water and natural materials are great, and so are the meticulously designed responsive play items, that offer tactile variation. This spur curiosity and deliver insights.



Physical



Social



Cognitive



Creative

FOREST GIRAFFE

MSC5416

The design is transparent and the no-roof design means ample opportunity for being seated and for informally supporting or supervising play for care givers



Eyes and mane are tactile features developed to produce an emotional impact: the eyes and the short-haired mane evoke an emotional reaction, padding the neck and looking into the eyes of the giraffe

RUNNEL WITH SPLASH TABLE

NRO508

Water tap push bottom
can be used by all, allowing for the understanding of cause-and-effect and object permanence



Splash table plug
can help regulate the amount of water in the basin easily and trains logical thinking and cooperation

Water channel
leads the water, which is great for cooperation and communication between the children

Step
helps children who need extra height to maneuver the tap and water channel

MUSIC PLAY PANEL

PCM000708

Ground level accessibility
and height makes the panel accessible for all and allow a number of users to interact from both sides

Material and tactile variation
adds sensory versatility: tactile as well as auditory stimulation



Black rubber flaps
can be used to create sound from the pipes

Music pipes
offer sensory variation with a tuned and tonal sound outcome. The pipes sound when hit with hands or sticks. The pipes are hollow, and small items can pass through them. The pipes are tuned to create a recognisable tonality (from the left: G, A, BB, C, BB, A, G)

LEARNING PLAY PANEL 3

PCM0033

Different height
of panels to provide variation. Middle desk can be used as a seat by care givers

Turning table and numbers
provide varied tactile and auditive stimulation: the blue spheres run in toothed grooves which adds a rattle sound to the play. The turning table spur social interaction from side to side of the panel.



Tumblers
feature different drawings to assist in playing e.g. shop

Gearing wheels
are amazing for hands-on understanding of cause-and-effect: the wheels push each other around

Sand funnel
is a favorite play exercise that trains children's understanding of object permanence by passing items and sand through



Combination systems

These play combination systems offer varied play options for all abilities, across ages. There is always thrilling physical and socially rewarding play events at ground level. Play panels can provide tactile variation and create play corners for more quiet play.



Physical



Social



Cognitive

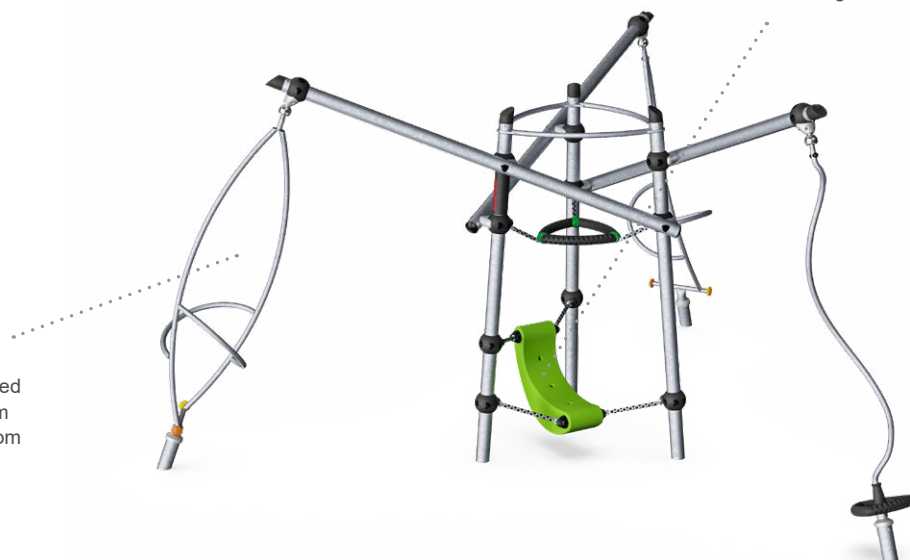


Creative

The play shell can be accessed from ground level and provide attractive seating

CANOPUS GXY925

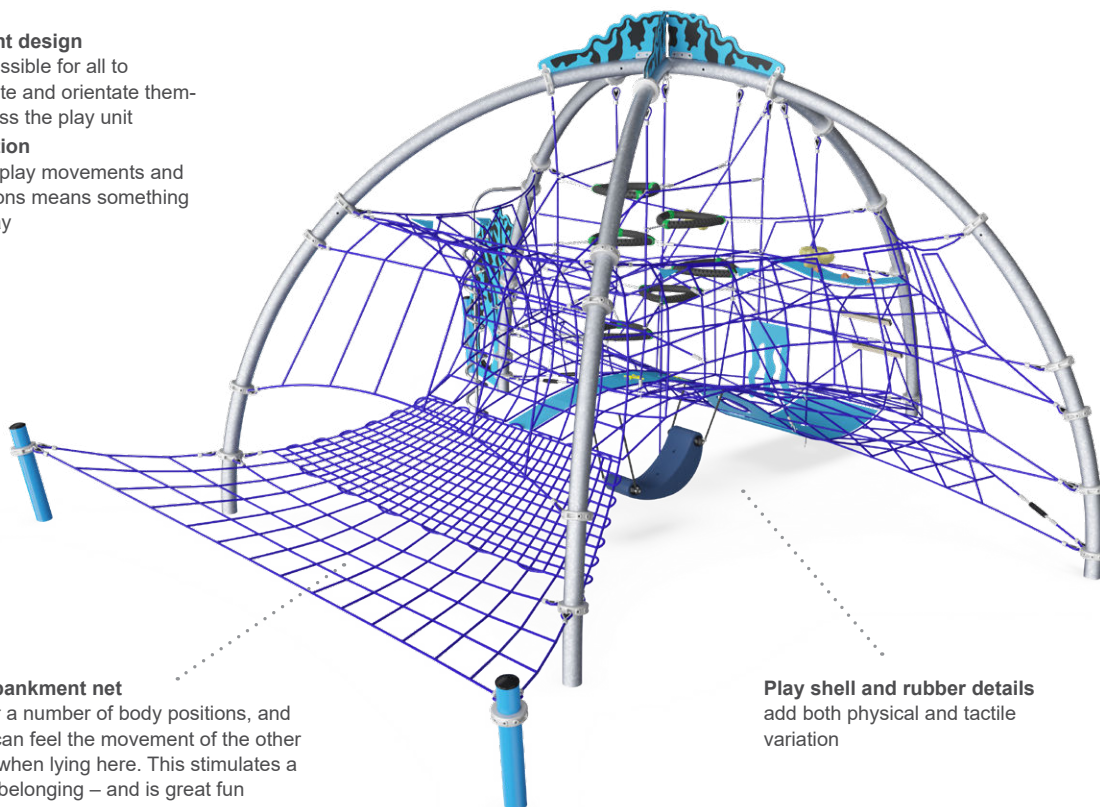
The Musca Spinner can be used from a seated position and pushed from the outside or worked from the inside



OCEAN DOME

COR85500

- **Transparent design**
makes it possible for all to communicate and orientate themselves across the play unit
- **Rich variation**
of possible play movements and body positions means something for all to play



Vast embankment net

allows for a number of body positions, and children can feel the movement of the other climbers when lying here. This stimulates a sense of belonging – and is great fun

Play shell and rubber details

add both physical and tactile variation

TWO MEGA TOWERS, ULTIMATE, ADA STAIRS

PCM200410

The curly climber

is a great way to glide down and rotate, seated on the winding steel tube and supported by a good grip of the pole

Double slide

adds physical thrill, invites socializing, and supports parent-child and peer-to-peer play



Inclined climbing wall

offers a supportive entrance climb

The U-net

offers great variation in body positions: climbing, swaying, lying, sitting, standing. The transparency facilitates communication between inside and outside. The net can be swayed by peers or care givers on the outside, accommodating children lying



Ramp structures

Ramps provide access to levels of play otherwise not reachable, for instance in or from wheelchairs. The ramps go through levels that add play to the trip up with a variation of play items that invite exploration with friends, across to the outside or from the outside to the inside. So, all have something meaningful and playful to do on the way up or down the ramp.



Physical



Social



Cognitive



Creative

TOWER WITH RAMP

PCM103010



PATHFINDER

PCE3051

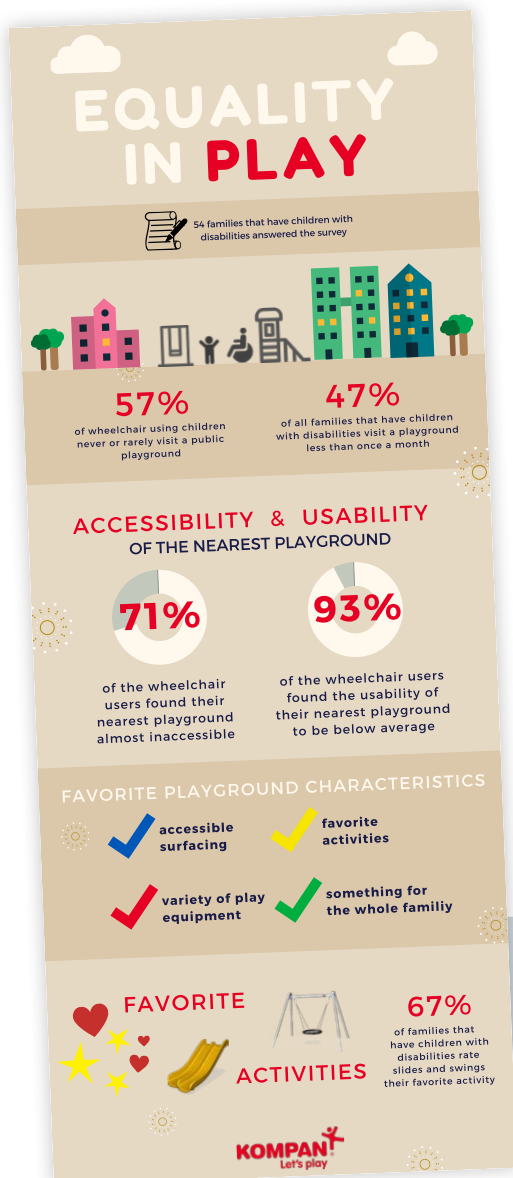


KOMPAN Play Institute research

The KOMPAN Play Institute is KOMPAN's unit of play specialists, dedicated to developing, documenting and researching play and playgrounds. The institute has been part of developing, researching and advocating playgrounds for KOMPAN since the 1980s.



KOMPAN white papers on Inclusive Playgrounds.



Equality in playgrounds for children with disabilities?

Equality is a way to happier, healthier and more sustainable communities. The UN Sustainable Development goal no. 17 is about equality. But not everyone is equal when it comes to access to leisure offerings and playgrounds.

Leisure activities are the hardest to access and use by citizens with disabilitiesⁱ. Since physical inactivity is one of the four

biggest contributors to premature deathⁱⁱ, the accessibility to public leisure areas, such as playgrounds, is crucial. Apart from the obvious health benefit of playgrounds, there is a considerable social-emotional benefit: play between children with disabilities and typically developing children supports the areas of self-efficiency, tolerance and empathy of both user groupsⁱⁱⁱ.

i Disability statistics – barriers to social integration, Eurostat 2015

ii The Lancet Series on Physical Activity, 2012

iii Frontiers in Public Health, Sept. 2016, vol. 4, art. 187, Ross et al.

Survey of playground use

Pupils and parents from the Nørrebro School for children with severe disabilities participated in the KOMPAN Play Institute survey on Equality in Play, investigating the distance, accessibility and usability of playgrounds for these children. This infographic shows the outcomes of the survey. If you would like to read more, please download the white paper on www.kompan.com.



The KOMPAN Play Institute researches and observes playgrounds.

Truly inclusive? The reward of thrill in universal play designs

To which degree can non-specialised, age-appropriate play equipment and playgrounds motivate play and be used by children with mobility and learning disabilities?

KOMPAN Play Institute set out to find answers to this question. The aim was to make playgrounds more inclusive and motivating for all children by drawing upon universal play formulas that unite children in play. Based on play observations of 1) 4 to 6-year-old children with disabilities in their kindergarten, and 2) interviews with their teachers, we gained a series of insights:

Good inclusive playgrounds are not necessarily much more complicated, nor time and space-consuming than other playgrounds. They can function as physiotherapy for a wide range of children with physical disabilities.

Play preferences

- Formal, physical play is by far the most frequent and most popular play type.

The children wanted physically thrilling activities.

- Being with friends and socialising was as important as thrilling activities.
- The children preferred play equipment that they could use independently. They also very much liked being able to enter play equipment independently.
- Being able to access a play unit independently does not automatically imply that play activities can be used independently. The popular activities were evidently the ground-level solitary play activities, which 50% of the children could access and enter independently, and which all children could use independently.

Thrill as a motivator

Physical thrill is a main reward and attraction to the observed children with physical disabilities. That thrill made the children take leaps of learning through play, both physically, socially and cognitively. Our observations indicated, however, that the attraction of spending time with peers may

overshadow the thrill of a given physical attraction. In short, the thrilling activity needs to be accessible where peers are present. Isolating it in a separate part of the playground meant that it was not used.



Universal Design for Inclusive Play

This publication showcases a series of guidelines, insights and research on planning successful playgrounds for all users, with or without disabilities. These insights are exemplified with practical cases of how to plan as well as a number of examples of great play equipment for all.



KOMPAN International Sales

C.F. Tietgens Boulevard 32C

5220 Odense SØ

Denmark

Tel.: +45 63 62 12 50

export@kompan.com

www.kompan.com