



Young or Old, Universal Design Benefits Everyone



**KOMMUNESKTORENS
ORGANISASJON**

The Norwegian Association of Local and
Regional Authorities

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BETTER TOGETHER: The KS Network for Universal Design is all about collaboration. (Photo: Mikkel Meister)

This booklet was published by KS.

KS advocates the interests of the local government sector towards the national Government, the Parliament, labour organisations and other organisations. As of January 2020, all of Norway's 356 municipalities and 11 counties are members, as well as 500 municipal, inter-municipal and county enterprises.

This booklet is inspired by the members of the KS Network for Universal Design, which was established in 2013. The goal is to contribute to an inclusive society by sharing experiences and removing barriers.



A LIFT TO FREEDOM: An innovative lift from the top of a hill to the station in Holmestrand, links the town together for those who have trouble climbing the steep hill.



Inclusive local communities for all

Universal design is all about creating inclusive communities where everyone can participate. “Age-friendly local communities” is a prioritised initiative from KS. In 2019 and 2020, we are establishing networks, with a view to develop a model for a national network of age-friendly local communities.

Our starting point is that everyone needs universal design. However, the “Age-friendly local communities” initiative has a more comprehensive approach that includes a number of sectors and stakeholders. KS aims to strengthen the synergies between universal design and age-friendly development.

This leaflet presents some of the numerous exciting and innovative initiatives carried out by regional and local authorities in Norway, where the goal is to give everyone better access to outdoor spaces, meeting places and buildings. Through our initiative, we also want to create opportunities to learn from one another, so that we can move our work forward to create good, inclusive communities from everyone.

I am pleased to see that the universal design network for regional and local authorities, chaired by KS for at least four years, will be continued in 2020. The ultimate goal is to make sure universal design is integrated in all plans and measures, in order to create more inclusive local communities. We hope the examples and experiences in this booklet, from Norwegian municipalities across the country, serve as an inspiration. The National Executive Committee of KS has adopted a long-term plan for the period 2016-2020:

These are our overall objectives:

- Inclusive government and democracy
- Healthy local authority economy
- Attractive employers
- Sustainable health and welfare services
- Inclusive childhood
- Viable regions, cities and districts

Working in a local or regional authority, either as an employee or as an elected representative, primarily means working for a community that includes everyone. Let’s create good local communities together!

Gunn Marit Helgesen
President of KS



HOLISTIC THOUGHT PROCESS: Jonny Nersveen is a professor at the Universal Design lab at the Norwegian University of Science and Technology (NTNU). He emphasises the importance of holistic thinking. (Photo: Fredrik Naumann/Felix Features).

A collaboration that puts people at the centre

What is the challenge, and how can it best be solved? With this focus, professor Jonny Nersveen and his team devise innovative solutions to facilitate access and participation for all. “We have to stop only thinking about technology and start placing people at the centre,” says the doyen of universal design.

NERSVEEN AND HIS TEAM work at the Universal Design lab at the Norwegian University of Science and Technology (NTNU). The lab opened in 2010 and is based in Gjøvik, Norway. It is the largest of its kind in Europe.

“You have to go to North Carolina in the US to find anything similar. We receive visitors from all over the world, and I think that is because we started thinking in a completely different way,” says professor Nersveen.

“We place the human challenge at the heart of it all. In other words, we start with the challenge, not the technology. If you go to technological environments they will start at the other end, to try to create profitable inventions. What we are concerned with is people. Technology is just a tool,” he says.

INTERCONNECTED

The ultimate goal is to create a truly universally designed society. The NTNU lab is key to reach this goal. The solutions that are developed, are often the result of close collaboration between several partners.

“I agree with Gro Harlem Brundtland (former prime minister. Ed.note): Everything is interconnected. Space is one of the major challenges with universal design and space is expensive. Saving a few square metres on a large institutional swimming pool makes a big difference to financial results. What if we managed to build more compact wheelchairs, which turn differently? That would save us a lot of money and have consequences for architectural design,” Nersveen continues.

He finds the lack of interdisciplinary thinking problematic. “Academic subjects are so disconnected. Just take a look inside a university. One faculty is about this, another about that. There is IT doing their things, health works on theirs and then there are those working on construction. All this is happening without any constructive dialogue.”

This lack of interdisciplinary collaboration influences applications for research grants.

“We have to apply for programmes that already exist. There are few places where we can apply for interdisciplinary funding.”

KEY PEOPLE

Key people within the world of universal design are important for operations at the NTNU lab in Gjøvik. It was actually over a beer that Jonny Nersveen and Jan Tore Lindskog first started thinking out loud about one of the many challenges: the size and fittings of bathrooms. Lindskog is a special advisor in the Department of Development in the Municipal Undertaking for Social Service Buildings in the City of Oslo.

“We build many nursing homes and get a lot of feedback from users. Research also shows that many injuries happen in bathrooms. People fall whilst moving around. That is why Jonny and I thought it must be possible to challenge the market.”

To start with, they communicated the challenge by inviting people to a dialogue seminar.

“During procurement processes we often get presented with exactly what we say we want. This time we didn’t, we simply said what outcomes needed to be met. In other words, we started with the challenge, not the solution.”

“Rather than saying anything about desired outcomes, we challenged the market to come up with new ideas to fulfill our wishes,” Lindskog says.

This was almost the opposite of normal procedure.

“During procurement processes we often get presented with exactly what we say we want. This time we didn’t, we simply said what outcomes needed to be met. In other words, we started with the challenge, not the solution.”

FEWER INJURIES

One of the challenges in this context was to reduce the risk of accidents and injuries during movement, as well as reducing the space used. The invitation to a dialogue seminar was met with a tepid response. Instead they made direct contact with suppliers who had taken an interest in the seminar, and invited these to take part in an innovation competition.

A broadly composed jury, consisting of representatives from Public Construction in Oslo, the Agency for Nursing Homes, the Assistive Technology Centre, the Norwegian Labour and Welfare Administration, design and university environments as well as an occupational therapist, assessed the proposals.

“The interdisciplinary composition of the jury was very important. Various academic environments have different outlooks on a subject,” Lindskog says and adds that the competition was a part of a supplier development programme by the Confederation of Norwegian Enterprise (NHO).

The programme helps government agencies, municipalities and municipal agencies that want to use public procurement to create innovation.

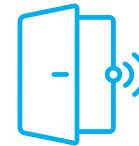
This was in 2017. Three of the most interesting proposals were selected. The winners received a 100,000 Norwegian kroner (appr 9,900 euro) prize, and the chance to have their projects constructed as a 1:1 scale model in the NTNU lab at Gjøvik.

Jonny Nersveen and Jan Tore Lindskog think there is too much focus on centimetres, millimeters and regulations when universal design is discussed.

“That is, of course, important, but not everything is regulated. It is important to be able to think outside the box,

too. It is very exciting to work in an interdisciplinary way with innovation, to look for solutions that make people’s lives easier,” Lindskog says.

Among the three proposals, one project stood out in particular: The revolving toilet – that professor Jonny Nersveen and advisor Jan Tore Lindskog regard as a bathroom revolution.



Looking for a new solution

“The key is to focus completely on user needs,” says Jan Tore Lindskog.

He is working on a project for intercom systems. “We are going to try to adjust door intercom systems to the user’s needs. Suppliers would like to have products with lots of fancy features, but older people and people with cognitive disabilities would rather have something easy,” Lindskog says.

He is a special advisor for development in the Municipal Undertaking for Social Service Buildings in the City of Oslo. “In one of the sheltered homes a door intercom was mounted on the sofa. The idea was that users would not have to get up when someone rang the bell downstairs. What happened instead was that they started looking for their phone rather than opening the door.”

In the door intercom project they are collaborating with a sheltered home which has these challenges. “A large network and feedback from those working on the ground is worth its weight in gold,” Lindskog concludes.

Revolving toilet

First came height adjustable toilets. Followed by wash'n blowdry. Now, revolving toilets are being developed. Professor Jonny Nersveen thinks the invention of the revolving toilet is revolutionary.



OVERVIEW: All testing is filmed from above. Research assistant Alf Dalby demonstrates the revolving toilet. (Photo: Fredrik Naumann/Felix Features).

IT WAS ALL DECIDED over a beer. Jonny Nersveen, professor at the universal design lab at NTNU, the Norwegian University of Science and Technology, and Jan Tore Lindskog at the Municipal Undertaking for Social Service Buildings, met and agreed they would initiate a world wide literature study on bathroom lay-outs. The goal was to develop a smaller bathroom with at least equal functionality.

“We realised that it is the suite itself which limits us in terms of the size of the bathroom. Where do we place the shower, toilet, cupboards and so on?” Nersveen explains.

However, the answer was not to be found among the limited assortment of equipment their investigation found. “Science had until now focused on issues like working environment, aesthetics and condensation. We could not find anything on area efficiency.”

COMPETITION

That is when the idea of having an innovation competition was born. They invited relevant players to solve the problem of space in the bathroom. Three submissions were selected; one of them borrowed ideas that Swedish students had developed years ago. A revolving toilet, just what Neersveen had been dreaming of. “I had naively assumed that was practically impossible, due to the bend in the sewage pipe,” he chuckles.

All submissions were thoroughly tested by 25 users, some with severe disabilities, as well as five health professionals used to working with them. Tests were made in a lab and filmed from above. Time spent was measured and the process analysed by observation and interviews.

“We measured, among other things, how many steps were necessary to move from wheelchair to toilet, the level of difficulty and risks associated with it.”

The reviews were collected in reports where each supplier received feedback on their project.

“That is essential. If you are to revolutionise anything, you need to take people with you: the construction industry, the architects, the entrepreneurs,” Nersveen points out. His concern is to put smart solutions into production. “We have no ownership of the products; we simply want good products to be produced.”

EXTENSIVE TESTING

The winner of the innovation competition was the producer Bano. The producer applied for funding from Innovation Norway and was allocated a grant to test the concept further. The testing is led by Haukeland University Hospital in collaboration with several municipalities. Revolving toilets are already fitted in sheltered housing and nursing homes.

The test period will last until the end of 2020 and manufacturers receive feedback from users throughout. “This ensures continuous product improvement. It is the product that must be adjusted to users, not the other way around,” Nersveen says. In his view, studying and focussing on universal design is fundamentally about socially-led development.

In the laboratory, research assistant Alf Dalby is getting into a wheelchair and manoeuvring into in the purpose built

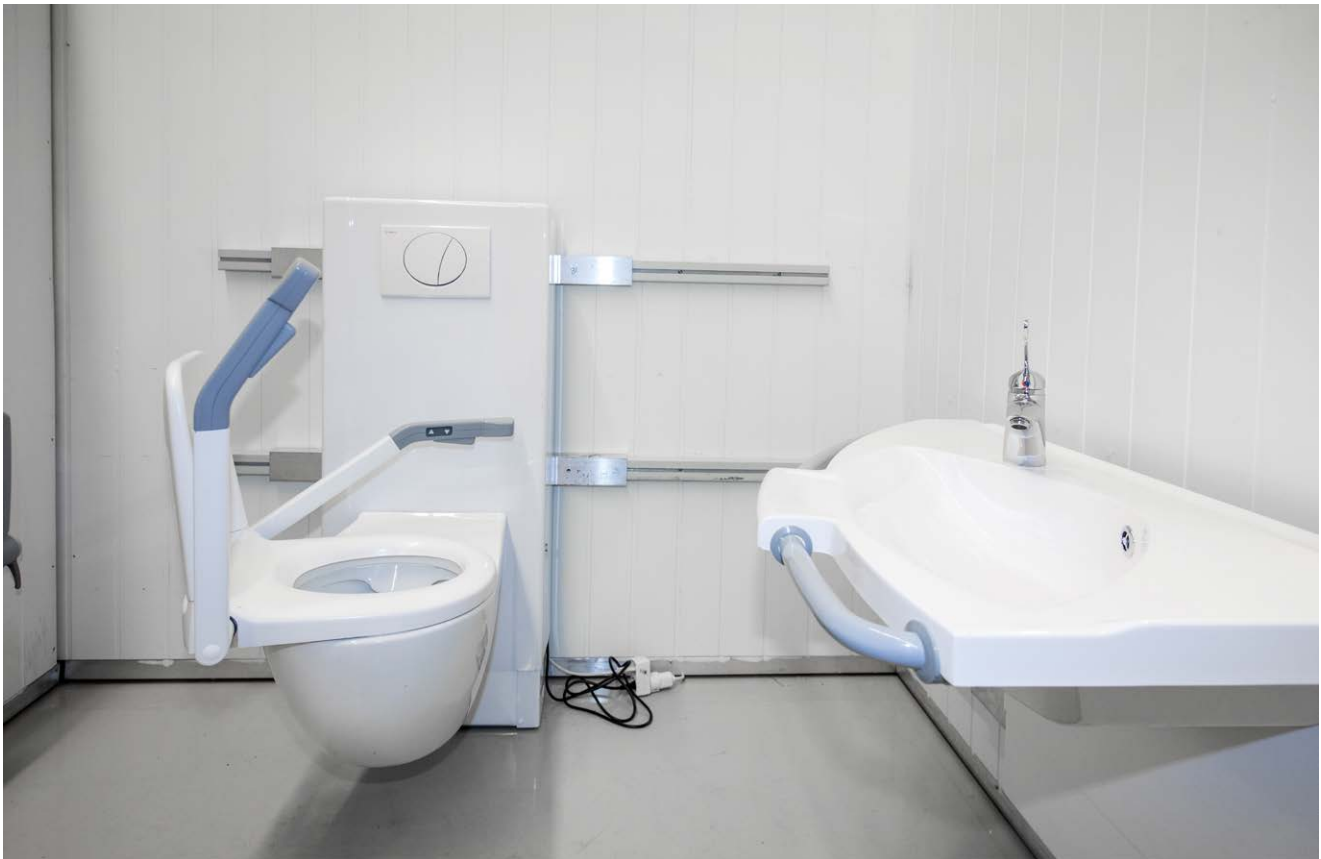


“We measured, among other things, how many steps were necessary to move from wheelchair to toilet, the level of difficulty and risks associated with it.”

bathroom. “When you wheel into a static toilet you have to back the wheelchair up against the back wall, and shift sideways over onto the toilet. If you’re paralysed on one side, which many are, you only have control over one side. This means that many can only move in one direction and struggle to get back into the wheelchair where they left it. You would have to move the chair over to the other side. Maybe you can manage that by yourself, maybe not. Either way, this requires a lot of space – the standard in Norway is 90 cm on either side of the toilet,” says professor Nersveen.



VERY FLEXIBLE: The toilet can be turned in both directions and this makes it easier to get to the sink as well. (Photo: Fredrik Naumann/Felix Features).



REDUCES RISK: A short distance between toilet and sink has many advantages, among others hygiene and reduced risk of falling. (Photo: Fredrik Naumann/Felix Features).

Gentle pressure applied on the toilet's armrest turns the toilet easily from side to side and straight, according to the user's needs. It is only the seat, not the pipe, that revolves.

"The wheelchair can remain where you left it and you can easily get on and off. You don't need to manoeuvre or struggle. Another advantage is that you are close to the sink and can wash your hands before you return to the wheelchair. That is impossible today."

EASIER AND SAFER

The revolving toilet considerably reduces the number of transfers for both users and carers. "When you need to go, you need to go, whether you are in a wheelchair or not. This is about respect for the situation and the question is; how to get over to the toilet in the quickest way possible?"

A short distance between the toilet and the sink is not only preferable for hygiene reasons; it also prevents falls. "In many of today's accessible toilets there can be quite a long distance between points to support yourself. Remember that a large bathroom is not the goal, but a common consequence of the fittings," Nersveen points out.

He thinks that the revolving toilet will make it easier to convert existing toilets to accessible toilets, because much

less space is needed; 4.5 square meters instead of the current 7 square meters. There are also great advantages for health professionals.

"On ordinary toilets the user sits with their back to the cistern. On this toilet, the backrest can easily be removed and health professionals can turn the toilet to face the user in different directions and for example, effortlessly reach for the shower with one hand," he explains.

A PhD student is now looking at what health benefits the new toilet can have for home care nurses.

"This will result in completely different conditions for people who often work in physically challenging situations, have to do a lot of heavy lifting and suffer from physical wear and tear," Jonny Nersveen says and adds that the prestigious medical university, Karolinska Institute in Sweden, has ordered testing of the toilet.

The goal is for the revolving toilet to be on the market by the end of 2020.

From desolate space to a lively oasis

Ever since 94-year-old Anne Kristiansen moved into her block of flats 26 years ago, she has looked out onto a tarmaced, desolate ball court. Now, her view has been transformed into an oasis.

“COME ON, DAJA!” Anne’s mild and happy voice calls a black cat to come for a stroll around Sandaker ball court, outside a 1970s block of flats in Oslo. The tower block contains 145 sheltered homes. Next door is the volunteer centre.

Anne moved here in 1993, together with her husband.

“He only got six months here. Yes, that’s what happened,” she says and hurries energetically on, pushing her walking aid in front of her. She has had it for many years.

“It’s good for when I feel a bit unstable,” the 94-year-old explains.

Accompanying Anne on the walk is her friend, 81-year-old Harald Øyen, who has lived in the block of flats for seven years.

“I call him the young lad,” Anne laughs.

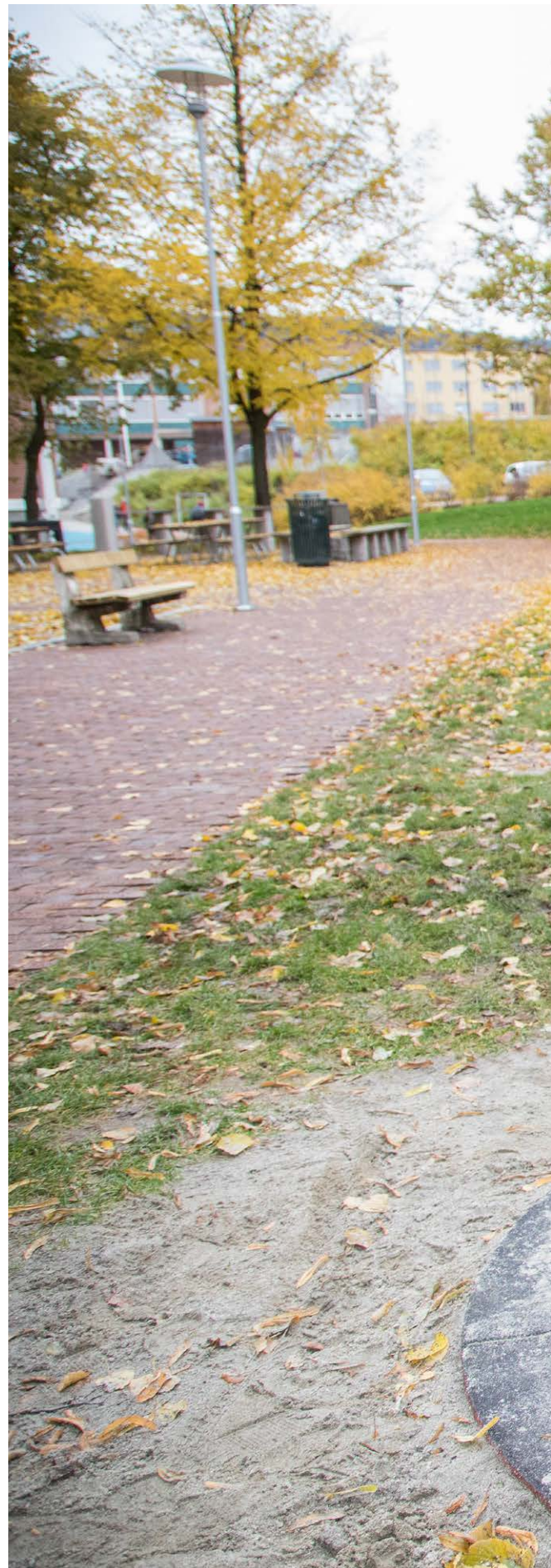
WAS UNUSED

The park is surrounded by several blocks of flats. Close by is the Nordpolen School and two kindergartens. A few minutes away is Sandaker shopping centre.

“For a time, when Sandaker Secondary School was where the Nordpolen School is now, there was a point to it, it would have been used for PE. For many years now, it has been left almost unused,” Mads B. Nakkerud says.

He is a park and business environment advisor for the Department of Culture and City planning in the City of Oslo, District Sagene.

The space used to have both a basketball and a handball court.





STRONG: No problem for 94-year-old Anne to lift from the bars. The new park invites all ages to get active. The park has got new, raised flower beds made from stones that were there before. The Sagene District's focus on recycling and reuse is reflected throughout the park. (Photo: Fredrik Naumann/Felix Features)



TRIO: Anne, Harald and Daja the cat are taking a walk on the path which has been adapted to the width of her walking aid. The walker path is about 100 metres long. They all live in the block of flats in the background. The benches will soon get new armrests, to make it easier to get up. (Photo: Fredrik Naumann/Felix Features)

“It was covered in tarmac so rough that you almost didn’t dare to play on it. And as no one played there, it was often used as a parking lot, which made it unsafe. The space was heavily planted with hedges and trees with a low canopy. It felt closed and unfriendly, and became a place where people would hang out after dark,” Mads explains.

“It was simply horrible, and not a tempting place to be. It is much, much better now,” Anne states.

OPEN AND SAFE

The upgrade included the removal of hedges, trimming of trees and lifting of canopies, to create a more open, see-through and safe space.

He chuckles when thinking about his first encounter with the residents:

“I was almost ordered in here together with a colleague. They wanted to talk to us about the park, and we, with our small budgets, got a bit worried. However, what they wanted was a bench and a birdbath. I’m still working on the birdbath-case,” Mads says and takes a look around the new park, which opened in September 2019.

The park has been developed in close collaboration with residents, the housing association, the volunteer centre, the kindergarden, the school and various bodies in the municipality of Oslo.

“A strong involvement from users is essential.”

Mads B. Nakkerud and Jan Tore Lindskog are unison.

Lindskog is a special advisor for the Department of Development in the Municipal Undertaking for Social Service Buildings in the City of Oslo. He ensured that standards for universal design were met.

“Much of the key to holding a focus on universal design is the transferral of knowledge,” Jan Tore Lindskog states.

“In this block of flats there are many residents with cognitive disabilities. It is therefore important to ensure that orientation is easy and that you start and finish in the same place,” Lindskog explains.

The cost of the project is about 5.2 million Norwegian kroner (appr 512,000 euro), and the bill is split between the Municipal Undertaking for Social Service Buildings, the Square and Meeting Place Grant, the City of Oslo Bike Project and gambling funds.

VERY HAPPY

The park opened at the end of September this year, and Merete Eide, who works in a day centre for people with dementia, is not frugal with her compliments when describing the result:

“Fantastic! For inhabitants and for us working here.”

The little park has a walker track, benches, tables, exercise machines and a ground level trampoline.

“Previously, we used the area a little in the summer, when

we helped people outside, but it has not been a place you would like to visit by yourself. This is something totally different, we will run many more activities out here now. Here they get something to do, they get some gentle exercise, have something to be responsible for, and get out and enjoy the fresh air. This means a whole lot. Too many become isolated in their own homes. Getting outside fills the days with purpose,” Merete says.

She goes on to explain excitedly about their plans for a walker rally with different posts, championships on the newly established pétanque court, the herb gardens they are going to grow in the new raised beds and all the al fresco dinners they are going to have in the new outdoor kitchen.

“This park will enrich everyone. In the raised flower beds we can grow perennials that they remember, herbs and chives. And when we barbecue it is not going to be one doing the work while the rest are watching. No, everyone can contribute and then we can enjoy the reward: Sharing a meal together.”

A diagonal path has been created across the park. Previously people had to walk around the park, now the path is bringing life to the neighbourhood. And the exercise machines invite activity.

“Older people love watching the children play here. Hopefully this can be a meeting place that connects generations,” Merete says.

Some people may use the park more actively than others, but that does not bother her.

“As long as you are present, you are a part of what’s going on. It is like going to a football match. You don’t need to be on the pitch to think it’s fun.”

Anne is already a diligent user of the park and active in the volunteer centre.

“You are my right hand,” Merete says.



SUPPORTER: “Anne is my right hand,” says Merete Eide, who works in the day activity center for the elderly and people with dementia. They are looking forward to spring when the new flower beds are planted out. “Summer dahlias are the most beautiful thing I know. I counted 24 buds on one this summer. It is lovely to see it sprouting and growing,” Anne says, who decorates the bed for Christmas and Easter. (Photo: Fredrik Naumann/Felix Features)

OUT EVERY NIGHT

Today, Anne has already made a waffle mix and fried a tall golden pile of waffles ready for the evening bingo.

“The secret to good waffles is that there must not be any skinny milk in it! By that I mean skimmed or semi-skimmed milk. No, it should be cream, whole milk, sugar and cardamom. And real butter. That needs adding at the end, otherwise it goes wrong,” Anne reveals as she guides us around the park.

She stops by two parallel bars, parks the walker and lifts herself up by the arms. Legs dangle back and forth.

“Yes, I’m strong. Where do you think that comes from?” Anne laughs.

Shortly after, she bounces over onto the ground level trampoline and counts the jumps.

“One, two, six, hahahaha, I don’t think I’ll be performing on a national stage,” she grins.

The cat Daja watches her every move. Every night, Anne goes out to look for her and give her a treat.

“She doesn’t much like salmon,” Anne smiles.

She says that many people ask her how she is doing.

“Then I answer: I will go on until I don’t, there isn’t much else to do. But I’m not going to quit just yet.”

Anne and Harald like going for a ride on his bike. She sits in the wagon at the front, he cycles. But in the summer the roles will be swapped.

“I’ve got a new scooter, and I will ride that. Then it’s Harald’s turn to sit in the back. We can’t sit inside. It is important to get outside and see the nature,” Anne says before she concludes:

“That’s when I feel that I live a fun life!”



THE PARK CONTAINS:

- Walking paths
- Cycling paths
- Square
- Petanque court
- Arches leading into a green area
- Bike parking/shed
- Different exercise machines
- Ground level trampolines
- A bike repair station
- Outside kitchen
- Raised beds
- A stone maze
- A place for skating



FULL PELT: Grandpa and Sigrid in Iladalen Park. It opened in 2018. (Photo: Fredrik Naumann/Felix Features).

Fun for big and small

Grandpa Tor Herolf gives 3-year-old Sigrid a push in Iladalen Park in the middle of Oslo. “What’s happened here is wonderful,” says the 79-year-old.

“EXERCISE MACHINES, BALANCE PODS, a pétanque court, a seven-a-side football pitch, playground equipment and swings: Very good,” Tor H. Torske nods approvingly.

He remembers what it was like before:

“A big hard court where all the water collected in the middle when it rained. The water turned into a little pond and we used to go there and feed the ducks.”

The new park has ground level trampolines, a bike practising lane, table tennis tables and a climbing net.

Tor is visiting from Molde to attend the Christening of his 12th grandson named after himself: Herolf. Both grandpa and Sigrid think it is great having the park just outside their door.

“It takes us only a few minutes to get here,” Torske says, who has been an architect for over 50 years.

GOOD FOUNDATIONS

He finds the planning of the park interesting:

“What you’ve got to work with here is a gift from God. This terrain and all these trees with such different character,” he says and points down the large green valley surrounded by blocks of flats. They were once built as accommodation for the winter olympics in Oslo in 1952. One part of the park is substantially upgraded, with special attention to accessibility.

“Here, you get a good overview of the park,” the architect continues to praise the project. He asks what little Sigrid likes the best.

“Is it swings, maybe?”



FOR EVERYONE: In collaboration, Mads B. Nakkerud and Jan Tore Lindskog have made a park accessible for everyone. (Photo: Fredrik Naumann/Felix Features)



EXERCISE: One area of the park is set aside for exercise. The children's play park is in the background. (Photo: Fredrik Naumann/Felix Features).



“It is not simply about movement, but also safety and accessibility, and that it is easy to orientate.”

CLOSE COLLABORATION

Mads B. Nakkerud is a park and business environment advisor in the Department of Culture, Community and City Development in the City of Oslo, District Sagene. He remembers well when the Friends of Iladalen requested the possibility for laying astroturf on the court.

“My initial answer was that there is no money, because there wasn’t. But then we thought, let’s think bigger: Let’s remove that moat. It was just a gravelled court with a football goal and basketball court, and a rather unusable area in the middle where water gathered. It was deep enough to be dangerous for kids. So then we applied for funding from a public scheme called “Squares and Meeting Places”. The Municipal Undertaking for Social Service Buildings then contributed a lot more to ensure universal design. We were also supported by the Football Association of Norway. It became a much bigger project,” Nakkerud says.

FOR EVERYONE

Jan Tore Lindskog, a special advisor at the Department of Development in the Municipal Undertaking for Social Service Buildings, was involved to ensure that accessibility and universal design was safeguarded throughout the project.

“We want everything to be used by everyone. So we collaborate closely on the development side, looking at what elements ought to be included and what must go.”

It is important to look at the issue as a whole,”

Lindskog point out:

“It is not simply about movement, but also safety and accessibility, and that it is easy to orientate.”

“Take a simple thing like that information board over there,” Mads points.

“Jan Tore pointed out that it ought to be lit. It not only makes it easier to read the information, but the board itself becomes a point to aim for from a distance.”

There are organically shaped tables and benches in the park, designed to easily fit prams, walking aids and wheelchairs.

“They are so big that it is possible to lie on them too,”

Lindskog adds.

“It is important that everyone can gather.”



GREAT CHANGE: Mads B. Nakkerud says that they started with clean slates. The park is divided into clearly marked zones, and all areas and activities are easily accessible. (Photo: Fredrik Naumann/Felix Features).

It is possible to get right up close to the ‘sand play bowl’, and the ‘birds nest swing’ is good for people with challenged mobility.

“It’s also big enough for co-playing. Two-three-four little ones can easily fit into it,” according to Nakkerud and Lindskog.

Currently, district Sagene and the Municipal Undertaking for Social Service Buildings are exploring the opportunity for permanent toilet facilities in the park.



WIDE ENOUGH: Sissel Løchen no longer needs to sit in the back. The door is wide enough for her to enter the pew, and the traditional panelling is intact. (Photo: Fredrik Naumann/Felix Features)

Inclusion in sorrow and joy

Time Church in South-Western Norway was accessible to all, but all could not participate on equal terms. Careful restoration made the listed building a sanctuary to the entire parish.

“I WILL NEVER FORGET when you told me you had to sit at the back during your daughter’s confirmation. You were rejected, in a way,” says dean Kjell Børge Tjelsland.

“Yes, the church was accessible but not universally designed,” says Sissel Løchen, who is in a wheelchair.

“Happy occasions such as weddings and confirmations are one thing, imagine what it is like to be separated from your family during funerals, when you are in grief,” says Løchen.

When the church was to be rehabilitated for its 150th anniversary, the parish and the municipality made the most of the opportunity. The challenge was to create an inclusive church, without compromising the building’s listed qualities.

The answer was involvement. The Directorate for Cultural Heritage, local user groups, the parish leadership and the municipality cooperated. By challenging each other through dialogue, the church was transformed.

The first order of the day was to ensure that those

dependant on wheels could sit in several locations, including in the front row, and move from the parking lot to the altar without help – and alongside everyone else.

Outside the church, the side door ramp was removed. Instead, the main entrance was rehabilitated, making it possible for everyone to enter through the same door. Inside the church, the aisle was elevated to provide unrestricted access to three pews, the altar and the baptismal font. The elevated floor ‘floats’ on the original floor, helping to preserve it.

The Directorate for Cultural Heritage wanted the wooden panels by the pews to remain intact. By removing a row of pews and join the panel and the door together to make a broader door, an electric wheelchair could fit in.

The result of the rehabilitation is an example of what happens when you change your mind-set from “accessibility” to “universal design”.

New city hall full of history



A city hall from 1956, an old Bank of Norway venue and a brand new statement building have been seamlessly combined into a new city hall for Bodø. With access for all employees and citizens.



MARCUS ZWEINIGER PUSHES a pram outside of the new city hall in the centre of Bodø in Northern Norway. The landscape architect and universal design advisor for the Municipality of Bodø is currently on paternity leave, but since his colleagues moved into the new city hall, he has no problem popping over with his son Aaron in a pushchair. It would not have been as easy in the old city hall.

“Previously, it wasn’t possible to enter with a pram or a wheelchair. For example, if you were attending a meeting in the council chamber, you had to go through the back entrance, which took you into a cellar in order to take the service lift up,” Marcus Zweiniger says.

“In short, the design was appalling in terms of giving everyone a dignified welcome,” he says.

In order to meet today’s standard, it was, according to the universal design advisor, necessary to make significant changes to the way the city hall welcomes people:

The main entrance had to be moved, and the entire entrance area needed to be universally designed. Where the old main entrance faced the street Kongens gate, the new entrance is now in Torvgata. Those attending meetings after regular opening hours can access the public entrance on Kongens gate, where there is a lift directly up to the council chamber.

THREE BECOME ONE

With a price tag of nearly 700 million Norwegian kroner (appr 69 million euros), this substantial 6400 square metre city hall accommodates 400 employees over six floors. A significant part of the cityscape, the three buildings that make up the city hall stand there side by side. On the inside however, they seamlessly glide into one another.

“The architects deserve praise for managing to connect three so widely different buildings – the bank, the new city hall and the old city hall – almost without you noticing where in the building you are. I still get lost myself,” Marcus Zweiniger laughs, and clarifies:

PAST AND FUTURE: Marcus Zweiniger and little Aaron can finally take the pram into the city hall in Bodø. The new building, designed by Danish architects Atelier Lorentzen and Langkilde, is linked together with the old city hall (right) and the old Bank of Norway building (left). (Photo: Fredrik Naumann/Felix Features).



OPEN HOUSE: The atrium and the People's Forum in the city hall is open to all Bodø citizens. The office furniture piled up against the wall is the art work "Poem to bureaucracy" (Dikt til byråkratiet), by Per Kristian Nygård. (Photo: Fredrik Naumann/Felix Features).

"That isn't necessarily great in terms of universal design, where easy orientation is important. However, it shows how well they have managed to create a new space from different historical eras. They have also done it in a way that works with the many different levels between the buildings," he says.

FULL ACCESSIBILITY

The protected facades of the listed historical buildings are preserved, but the inside of the city hall is new, wall to wall. The building is universally designed and rigged to accommodate a modern working life with open plan office spaces, activity based zones and free seating. The employees do not have their own desks.

Through one of the corridors in the first floor, Svein Ivar Leithe is coming in a wheelchair. He is an accountant and has been to a meeting in the city hall with external partners. They have had lunch in the canteen on the top floor, followed by a meeting in one of the meeting rooms located around the open atrium on the ground floor, called the People's Forum.

"I can get around everywhere in the city hall, either by lift or by using the ramps, says Svein Ivar Leithe.

When he is back with the accounts team, appropriately located in the old bank building, he will have to go up a sloped ramp to get into the old part of the building.



RAMP ACCESS: The half floor between the People's Forum and the service centre can be solved by taking the lift or using the ramp. (Photo: Fredrik Naumann/Felix Features).

"There are quite a few different levels in the building, but this works well," he says.

In his team's office space there are height adjustable desks like everywhere else in the building. And when Svein Ivar Leithe needs to work in one of the quiet zones, he places his laptop on his knees and wheels straight in. "There are no door steps here and everything needed to connect a PC is found on top of the desks. Therefore it's easy for me to use," he says.

Svein Ivar Leithe describes the old city hall as "utterly hopeless" in terms of universal design and accessibility. He did not work full time in the old city hall and the accounts team was previously located elsewhere in town.

"I did have to go to the city hall occasionally, and my only alternative was to use the back entrance and take the service lift."

PARTICIPATING

Weeks after moving into the new building, he has not yet encountered any major problems, although a few small challenges became apparent once the building was being used.

"I think the doorframe on the main entrance and the other entrance doors are a little high, probably because of regulations. I solve this by backing in, rather than lifting the wheel chair with the front wheels first."

In the People's Forum, which is to be used for all sorts of events for employees and citizens, the seating is built to different heights.

"There are no wheelchair specific spaces there, but I can sit on the top or bottom level and that works. The point is that I am able to participate in the same way as everyone else."

All in all he is thriving in his new work place.

"It has turned out very well, in particular the fact that all departments are under one roof."

Previously, we were located all over the city. Now it's much easier getting hold of people. And for me in a wheelchair: I get around everywhere!"



ON WHEELS: Accountant Svein Ivar Leithe has his work place in the old bank building with a view over the sloped facade of the new building, which is inspired by the nature of Northern Norway and the mountains surrounding Bodø. (Photo: Fredrik Naumann/Felix Features).

The end of heavy lifting

There is no longer a need for learning support teacher Marius Moen to lift the wheelchair when his pupil struggles to get around. At the new Tverlandet School, the work day has become easier.



FINDING THEIR WAY: Each year group has its own entrance with an associated colour. (Photo: Fredrik Naumann/Felix Features)



HAPPY EMPLOYEE: Marius Moen assists a wheelchair user, and their days are easier at the new Tverlandet School. Here, the assistant doesn't have to carry the wheelchair user up the stairs. (Photo: Fredrik Naumann/Felix Features)



BRIGHTLY COLOURED ENTRANCES show the way.

Each entrance at Tverlandet School has its own colour – making it easy for both children and adults to know where they belong. The newly built school is located in the heart of Løding, outside the city centre of Bodø. The school was finished for the start of the new school year 2019/20. It replaces two old schools and has about 600 pupils from years 1 to 10. The school is built according to the principles of Universal Design and for today's requirements for inclusivity.

“A big and positive difference is that it is much more spacious here at Tverlandet School, compared to the old Løding School,” Marius Moen says.

He assists a pupil in year 5, who uses a wheelchair. More space has great practical implications for both of them in their everyday life at school.

“The pupil can use an electric wheelchair here and drive it himself. It has made it much easier to play with his classmates,” Marius Moen says and emphasises the importance of that.

“Now, he has the opportunity to be more independent.”

LIFTING WAS NECESSARY

The old Løding School was cramped in many places, like in the changing rooms. At Tverlandet School there are large changing rooms for all pupils, and the younger ones have



“Our experience is that this has become a school with room for all groups to move around.”

Pia-Helen Pedersen
Planning and Buildings Department

both a mudroom and a changing room. There is a parking space for wheelchairs in the changing rooms. There are several accessible toilets in the building, large enough to turn a wheelchair, so that users have the opportunity to manage themselves.

From the entrance and the changing rooms there are lifts going up to the classrooms on the first floor. The main lift is centrally located inside the main entrance, next to the school hall which is used for school assemblies.

“We come in on the ground floor and take the lift straight up to the classroom,” Marius Moen says.

At the old school there was no lift. Marius and his pupil had their classroom on the ground floor, but as soon as they were going somewhere else, they faced problems.

“The library was on the first floor and I had to carry the pupil up the stairs.”

Marius Moen smiles. Both for the pupil and for his own sake, he is glad they don't have to do all the heavy lifting anymore.

“It sort of worked when he was in year 4, but now he is in year 5 and he gets heavier every year.”

A LITTLE EXTRA

Pia-Helen Pedersen from the Planning and Buildings Department in the Municipality of Bodø emphasises that universal design was at the core throughout the construction process.

“Our experience is that this has become a school with room for all groups to move around. We have gone above and beyond the national standard requirements,” she says.

“For instance, we have prioritised height adjustable desks



TOGETHERNESS: Chairs are removed in the lecture hall for wheelchair users to be able to sit side by side with their classmates. (Photo: Fredrik Naumann/Felix Features)

“What we’ve succeeded with here, is that we have fulfilled the minimum technical standards and, additionally, managed to think about how the building and individual solutions can work for both employees and pupils, for the wellbeing of everyone.”

in the school kitchen and the science labs. The rooms are furnished so that it is easy to change the layout to fit with different needs. In the lecture hall some chairs have been removed to enable wheelchair users to sit on the same row as their classmates.”

Marius Moen nods.

“Yes, when we’re in the lecture hall, my pupil sits with the rest of his class and that works very well,” he says.

For visually impaired people, attention has been paid to navigation aids, both natural and artificial, as well as sufficient lighting and contrasts. For hearing impaired people emphasis has been put on good acoustics and the reduction of ambient noise. Key rooms have a hearing induction loop and there are microphone systems in others.

The goal is to enable education to take place in a dignified way, including for hearing impaired pupils.

WELLBEING FOR ALL

Landscape architect and universal designer Marcus Zweiniger in the Municipality of Bodø has, among other things, worked

on the outside areas of the school. He knows the school well as his children go there.

“What we’ve succeeded with here, is that we have fulfilled the minimum technical standards and, additionally, managed to think about how the building and individual solutions can work for both employees and pupils, for the wellbeing of everyone,” he says.

What the universal designer has experienced is that people’s everyday challenges exceed what is listed in the national standards.

“Finding out what is needed demands knowledge and flexibility from commissioners, advisers and architects,” he says.

At Tverlandet School a choice has been made to provide entrances and changing rooms for each pupil entrance, regardless of age. The pupils move a lot during their schooling and the school building is made to work from years 1 to 10.

“The entrance solutions are important,” says Marcus Zweiniger.

“Everyone should be able to use the same entrance as their mates or colleagues – and feel part of the group”



CLEVER APPROACH: A clear contrast between the door and wall colours, as well as an obstruction free hallway, provide good accessibility. The strip of lights in the floor leads the way to the emergency exit. (Photo: Fredrik Naumann/Felix Features)



Sea swimming for all

Sleet in the air and six degrees in the sea does not frighten year round swimmers in Meløy. These ladies have been out in the elements before.

“THIS? A perfect day for a swim!”

Jorunn Winther laughs and pulls a yellow sou’wester down over her head. Her outfit consists of a swimsuit and very little else right now. While gusts of wind whip up the sea, she and the rest of the women’s swimming club, who call themselves the “Moss mats” run across the beach and shriek as they throw themselves into the waves.

Year round swimming in Northern Norway may be just for those with a special interest, but in the municipality of Meløy the goal is to facilitate access to the beach for all citizens. The popular swimming spot Stia, close to the municipal center Ørnes, has undergone a solid upgrade in order to ensure accessibility for all users of wheelchairs, walking aids and prams.

Grete Stenersen, who runs the office of culture in the

Municipality of Meløy, has been working on the project:

“Everyone might not be able to or want to swim, but at least, now, there is full access to the beach and everyone can enjoy the view and spend time with family and friends here,” she says.

Accessible walking paths and fishing spots already exist in Meløy, but Stia is the first beach and swimming spot made accessible to people of all abilities.

A TOUGH CLIMATE

Before this upgrade, going for a swim at Stia meant that swimmers had to climb down a steep path and pass large boulders which more or less blocked the entrance to the beach. This has now been replaced by a new, evenly sloping pedestrian path, which starts from the carpark. The route

SWIMMING CLUB: May-Helen Sørsandmo, Trude Nilsen, Greta Vatne Solfall, Åse Charlotte Abrahamsen, Ellen Kjærran and Jorunn Winther are all ready to test the new and upgraded swimming spot at Stia in Meløy. A new road enables access for all – year-round swimmers or not. (Photo: Fredrik Naumann/Felix Features)

READY FOR A DIP: The sea is cold, but Ellen Kjærran keeps her noggin warm with an orange wig. (Photo: Fredrik Naumann/Felix Features)



REFRESHING: The temperature is irrelevant, the keen ladies from Meløy swim winter, spring, summer and autumn. (Photo: Fredrik Naumann/Felix Features)

then follows the water's edge and is reinforced by a protective membrane below and an erosion protective rock face. Community planner in Meløy, Kjell Holdal, is still apprehensive as to whether it will withstand storms and bad weather.

"This is an exposed spot, and this first winter will be a test."

The new access was secured through an allocation of 630,000 Norwegian kroner (approx 62,000 euros) from the Ministry of Climate and Environment and Nordland County Council. Next year, the path will be paved, most likely using concrete, as that is more solid and weatherproof than tarmac.

The upgrade of the swimming spot will also continue. New toilets are due to be put up next spring, including an accessible toilet. Along the new path there will be tables and chairs. A place to roll wheelchairs onto one end of the beach is also being explored.

"Our long term goal is to facilitate everyone's enjoyment of the sea, including getting all the way into the water, for instance by rolling out a mat onto the sand," Grete Stenersen says.

It has not yet been clarified whether it is possible to build a ramp that goes directly into the sea, which can withstand large waves and big tides.

HEALTHY ALL YEAR ROUND

The women's swimming club has returned to shore. Dripping and ice-cold swimwear is pulled off and warm one piece fleece suits quickly pulled on. Jorunn Winther smiles happily.

"That was wonderful! The temperature in the water means nothing, it's all about the right attitude."

The women's swimming club in Meløy jumps in the sea every single Tuesday – all year round. Many of them are relatively new to it, but Jorunn Winther has been in the game for 25 years.

"It is so healthy. I have a nerve injury in one of my legs and I notice increased circulation in my foot when I swim. And I'm never ill. I think we need to both sweat and freeze to keep the regulation in our body going," she says.

One of the newly converted year-round swimmers is Greta Vatne Solfall. Until her debut last winter, she was, according to herself, Meløy's biggest wimp when it came to swimming.

"I couldn't even cope to swim when I was on holiday somewhere warm," she says and laughs.

Usually the women do not winter swim at Stia, as there is not yet a changing facility where they can quickly get into warm clothes. They have borrowed a boathouse close to another beach, currently their base.

"But in the summer, I love coming here with the family. It used to be almost impossible to get down here, but now it's great," Greta Vatne Solfall says.

"All we miss now is a changing room, then there will be winter swimming here too!"

From roundabout to a thriving town center

With a firm grip on her walker, June-Bente Grovassbakk is safely crossing the square in Glomfjord, a place where until recently cars used to have top priority.

THE LITTLE TOWN of Glomsfjord in the Municipality of Meløy in County Nordland, Northern Norway, has undertaken great changes to the city centre over the last few years. The busy roundabout, the snow ploughing chaos and the slippery roads during winter months are now replaced by a new square for all citizens to enjoy.

“Our aim has been to facilitate an age-friendly and universally designed town centre,” says Kjell Holdal, community planner in the Municipality of Meløy and one of the project managers.

Before the renewal of Glomfjord town centre started, a large roundabout dominated the square with random parking wherever possible.

“The roundabout took up most of the town centre,” Kjell Holdal says.

“It was a complex and chaotic traffic situation for both drivers and pedestrians, particularly in winter with packed heaps of ploughed snow and parking right up against the houses,” he explains.

FREE FROM ICE AND SNOW

The municipality raised 35 million Norwegian kroner (appr 3.4 million euro) and decided to do a proper job once the town centre was demolished: no polishing, but full redevelopment. Today, the traffic is redirected with new roads, pavements and parking lots. The driving pattern has changed and the

roundabout is gone. Where cars previously streamed through, there is now a square and a small park. The terrain in the centre, previously a myriad of steps and ramps, is now elevated and replaced with step free access to shops and hotels.

The entire town centre is upgraded with ground source heating from waterborne excess heat coming from the industrial park in Glomfjord.

“It was important for us to make the area accessible to everyone,” says Kjell Holdal.

“Today, there is no ice or snow on the streets, pavements or in the park. It has been a great success now that everyone can use the town centre all year around,” he says.

AN AGEING POPULATION

The Municipality of Meløy shares the same challenge as other municipalities in Norway: An increasing part of the population is getting older. There are in total 6300 citizens in Meløy, about 1100 of them live in Glomfjord, and about 20 percent are pensioners.

“People should be able to lead full and active lives.

Therefore it is important to facilitate an age-friendly local community,” Holdal says.

The centre is accessible to all; children, adults and seniors. Some of the measures taken include navigation aids across the centre, good lighting, planting schemes, and separate

“Our aim has been to facilitate an age-friendly and universally designed town centre”

GOOD FOR BUSINESS: Siv-Janne Barvik runs a clothes shop and is very pleased that her customers no longer risk their health when passing the ice in order to go through her door. (Photo: Fredrik Naumann/Felix Features).

COMMUNITY PLANNER: Kjell Holdal in the Municipality of Meløy has led the development project in Glomfjord. (Photo: Fredrik Naumann/Felix Features).



PRACTICAL: Ice spikes for shoes can be left unused when June-Bente Grovassbakk is crossing the square in Glomfjord. It is free from snow and ice after the restructuring of the town centre. (Photo: Fredrik Naumann/Felix Features).





OUT FOR A WALK: It is easier to use a pram now for Ida Rinnan and Silje Hagen, working in Glomfjord Kindergarten. (Photo: Fredrik Naumann/Felix Features).

pedestrian areas and furniture zones with benches and seating inviting a rest and a chat.

“More meeting places encourage more activity in the centre,” says Kjell Holdal.

One of the pensioners in Glomfjord is June-Bente Grovassbakk. After a visit to the foot therapist, she is back on the square, swinging her walker into a hotel. Pensioners meet here daily, the men on one table, women on another.

“We drink coffee and chat about knitting, grandchildren and everything else. For instance how many are driving in the wrong direction around the new square,” June-Bente Grovassbakk smiles.

This winter is her first using a walker, and even though she sometimes misses her car, and even the old roundabout, she is enjoying the easy access to the centre.

“It works very well. I’m not complaining. In other places the wheels on the walker get stuck in the snow.”

One of the other pensioners is Helen-Britt Pedersen. Her legs work, but her sight is diminishing and supporting herself on the walker feels safer. Today, she has been drinking coffee

in the hotel where she used to work, and now she’s off shopping. The entrance to the local Extra-shop is only a couple of metres away.

“Whether I use the navigation guides?”

Helen-Britt Pedersen has a good laugh.

“I hardly know what they are. I know Glomfjord, so well I can walk with my eyes closed.”

DANGEROUS TRAFFIC AND SLIPPERY ROADS

Two women pushing prams are crossing the square. Ida Rinnan and Silje Hagen from Glomfjord Kindergarten are out trying to walk two tiny tots to sleep. They are very happy with how easy it has become to push prams around the town centre since it was made step free.

“Working with the youngest children, we are dependant on prams when we go for walks,” Silje Hagen says.

It is safer too:

“It used to be chaotic and frightening with the roundabout. The heaps of ploughed snow were so high that you could not see from one place to another. Now, we have a clear view of

BEFORE

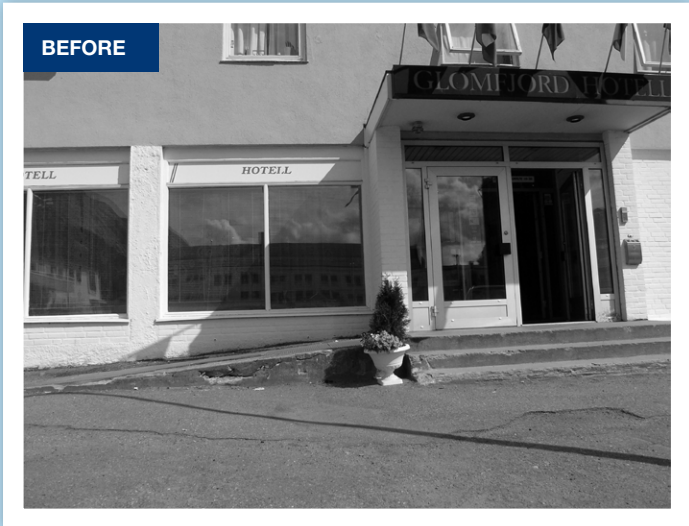


BEFORE: Roundabout, snow and parking right up against the houses.

AFTER



AFTER: The roundabout has gone, parking is orderly and the square is designated for pedestrians.



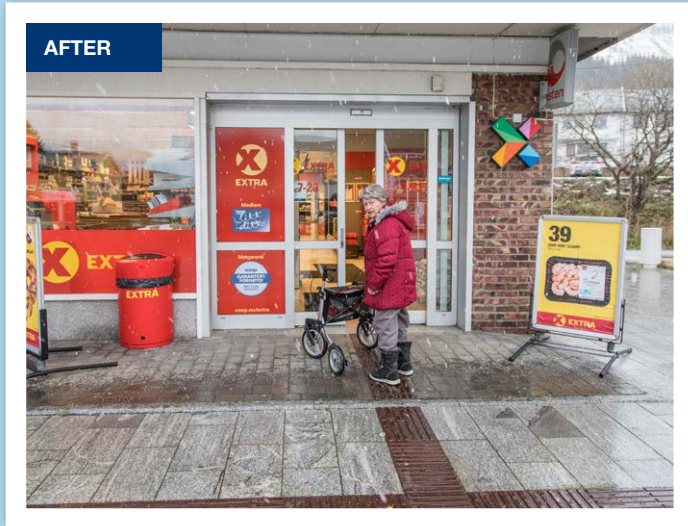
BEFORE: The old Glomfjord Hotel with a ramp and stairs.



AFTER: The ground has been raised and now Helen-Britt Pedersen can walk straight into the shop with her walker.



BEFORE: Two steps and a ramp to access the shop.



AFTER: The terrain has been elevated, making it possible for Helen-Britt Pedersen to enter the shop directly with her walking aid.



BEFORE: The old entrance to the cash machine.



AFTER: Step free access to the cash machine, which is also given a protective wind screen.

the square in both summer and winter, and it is safer when walking with children,” Ida Rinnan says.

In the clothes shop Fabiola, owner Siv-Janne Barvik is in the middle of unwrapping new clothes for the winter season. It is snowing, but outside the shop window, the snow is melting as soon as it hits the ground.

“It is fantastic that the square is heated now, and free from snow and ice,” she says.

“It is now much easier for my customers to come in and out of the shop. Before, I used to break up the ice outside with a pickaxe, in order to prevent broken hips.”

PREPARING FOR A NEW TIME

The decision to develop the town center of Glomfjord was made after Meløy was defined as a ‘restructuring municipality’, being allocated 75 million public kroner as part of a crisis package. Glomfjord industrial park has about 20 different companies, Yara (previously Norsk Hydro) is the county’s flagship company. Recently, many jobs have disappeared, such as when the solar panel producing company REC closed down, which lost the area 650 jobs.

Encouragingly, the restructuring of the municipality has so far created 350 new jobs.

“One of the goals with the development of the town center in Glomfjord was also to boost optimism and belief in the future,” says community planner Kjell Holdal.



“It is now much easier for my customers to come in and out of the shop. Before, I used to break up the ice outside with a pickaxe, in order to prevent broken hips.”



MEETING PLACE: Plants, seating and cozy lighting create an inviting atmosphere. (Photo: Fredrik Naumann/Felix Features).

Look out for breaks on the journey

There is no point in making the bus accessible if you cannot get to the bus stop. Universal design advisor Tomas Nesheim is calling for a greater investment in making sure that the journey works from start to finish.



THE FAST FERRY “FJORDGLIMT” is docking at the quay in Stavanger, on the west coast of Norway, and Tomas Nesheim manoeuvres his wheelchair down the gangway in a well practised fashion.

“This gangway works well, but then, it is one of ‘mine’,” he says with a wide smile.

Tomas Nesheim used to be lead universal design adviser in Kolumbus AS, the public transport company in the County of Rogaland. One of his responsibilities was to ensure accessibility on the many fast ferries in the county. Today, he is combining his life as a pensioner with advising

on universal design. One of his central concerns is what he calls ‘broken links in the journey’.

“What I mean by that, is whatever makes getting from start to finish on the journey troublesome if you struggle to walk, have sight or hearing difficulties, use a wheelchair or simply need to bring your pram with you,” he says.

“Long distances between different means of transport are often the biggest hurdle for many.”

To illustrate his point, the universal designer refers to the term ‘mind the gap’ from UK public transport, relating to the distance between the train and the platform.



SEAMLESS TRAVEL: "If you are taking a journey that requires changes, accessibility on one means of transport is not enough," universal design adviser Tomas Nesheim says. Here, he is trying to get from the ferry to the train station in Stavanger by bus. (Photo: Fredrik Naumann/Felix Features).

"Long distances between different means of transport are often the biggest hurdle for many."

"It makes no difference whether 'the gap' is the 10 centimetres that stop you from getting on the train or the 100 metres missing between two means of transport. No chain of transport is stronger than the weakest link in the journey," he says.

"The consequence is the same: You don't get to where you want to go."

SEVERAL LEGS

Today, he is taking a route through Stavanger to illustrate where stops occur when the journey requires transfers



CHANGING TO BUS: Both buses and bus stops should be accessible. (Photo: Fredrik Naumann/Felix Features).

between different means of transport. With him on the journey is his successor, Svein Ystanes, currently the Head advisor for universal design in Kolumbus AS.

Starting at sea is no arbitrary choice: Thousands of people in Rogaland are dependent on the fast ferry to get to Stavanger.

Post arrival on the Fiskepir terminal, they continue in the direction of the train station. Svein Ystanes travels this route every day. He commutes to work by boat from Hommersåk in Sandnes to the office in the centre of Stavanger, close to the train station.

“For me, it takes 10 minutes to walk from the boat to the train station, but for many that is not an option,” he says.

The alternative is a bus. The closest bus stop is about 150 metres from the Fiskepir terminal, via the pedestrian path along the quay in Stavanger. The universal design here is textbook: with sufficient lighting, good contrasts, navigation aids and seating.

“Benches are more important than you’d think,” Tomas Nesheim says.

“To many, being able to sit down en route is what decides whether they are able to make the journey.”



“For me, it takes 10 minutes to walk from the boat to the train station, but for many that is not an option,” he says.

Svein Ystanes
Head advisor for universal design, Kolumbus AS

BAD INFORMATION

At the bus stop there are new challenges: Is there an open and clear view from the bus shelter so that you can see when the bus is coming? Is the edge of the pavement at



NEXT LEG: At the next bus stop, the ramp down to the pavement works well. (Photo: Fredrik Naumann/Felix Features).

NO OVERVIEW: Tomas Nesheim is a local, but on this busy train station in Stavanger it still takes him some time to find the wheelchair access point on the platform. (Photo: Fredrik Naumann/Felix Features).



the right height for you to get straight into the bus or is a ramp needed?

Kolumbus AS is now in the process of mapping the bus stops and their accessibility. This information will be added to the journey app.

“We have worked hard to adapt the bus stops so that the drivers are able to drive right up to the edge and lower the bus down to the right height, to avoid a large gap for passengers getting on,” Svein Ystanes explains.

Bus number 1 swings into the bus stop and Tomas Nesheim gets on, using the ramp that is put down for him. The bus winds through the centre of town and stops after seven minutes outside Byterminalen, the city terminal, in Jernbaneveien. A few metres further on, after a zebra crossing, is the train station.

“We know where to go, because we’ve been here before, but lack of information is a general problem throughout,” Tomas Nesheim says.

He swings onto the platform at the train station. There is a lot of traffic, with a mix of local and regional trains.

Svein Ystadnes is not impressed with the accessibility in this area.

“There are orientation lines here, but they are worn out and badly maintained. The contrasts are low and colours blend into the tarmac,” he says.

“Are you taking this train?” one of the train conductors asks when he spots Tomas Nesheim in his wheelchair. “You need to go further down on the platform to where there is a ramp,” he explains.

Tomas Nesheim drives further down and finds the door where he can get on the train.

“Had there been an information board here, I could have easily found out where on the platform to wait with the wheelchair,” he says.

TAXI FOR TRAIN

Tomas Nesheim has travelled a lot, both privately and for work, and he has experienced broken links in the journey chain himself. Like that time when he was sitting on the train between Lillehammer and Oslo. At Hamar the train suddenly stopped and all passengers were put on a replacement bus. His colleagues simply moved from one means of transport to another, but that was not so easy with a wheelchair.

It was not possible to get into the bus with a wheelchair. That meant going by taxi from Hamar to Oslo and a 4000 kroner (just under 400 euros) taxi bill to the train operator.

Bus replacements for trains often cause problems.

“It seldom works well, because they use any sort of buses they can get hold of, and they are often old and not universally designed.”

Tomas Nesheim thinks it is about time to look at accessibility in public transport and infrastructure in a wider context.

“Until now, we have been mostly concerned with single point improvements, such as getting on and off individual means of transport. That is a good start, but we also have to look at what is needed for the journey to flow,” he says and points out:

“It is our responsibility to facilitate travel for as many as possible. Quality of life is closely linked with how people function in society.”

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