Cover Stories 2019

ENABLING A SUSTAINABLE FUTURE

The aluminium-free yoghurt lid
Fending of fire hazard
Circular polymers in the making

WHEN GIVING UP IS NOT AN OPTION • KIDS GET CIRCULAR
Making a better future happen

The tone in the discussion about climate change has changed during the last year and today there is a real sense of urgency to it. Maybe it can be attributed to Greta Thunberg’s direct call out for real actions. Or then the impact on climate change has become even more conceivable to even the staunchest of pessimists.

Regardless of what has been the accelerator, we are seeing - as so many times before during the course of history - that the real change comes from the young. They are in the driver seat, and the world needs to take note. Young consumers today are even mindful of what materials brands use in advertising: the Out-of-Home advertising sector is phasing out Polyvinyl chloride (PVC) from its banners and billboards as a result. We are acting on it.

The world consumes an astonishing amount of food packaging, and if we can succeed in making the packaging compostable or recyclable, the global trash mountain will diminish substantially. In this magazine you can read how Walki together with Pyroll has made a yoghurt cup completely compostable with an alternative to the aluminium lid.

Our innovation team at Walki is occupied with finding ways to make the world truly circular. Replacing mechanical recycling of plastics with chemical ditto will make all the difference: imagine all food packaging being recycled into plastics that is as good as virgin material. We are well on our way with our collaboration with Sabic, a pioneer in chemical recycling. We are also experimenting with non-fossil oil. For instance, tall oil, a side product from pulp production, has shown promising results.

What better place to start looking for some fresh ideas than schools? Children are curious by nature and when they get an idea in their heads there is little to stop them. Our initiative with the Circular Classroom is in full swing in several schools.

During this year we have made several successful acquisitions that will take us a step closer to our goal of making the world 100% recyclable or compostable by 2030. We acquired Finnish Plastiroll, a pioneer in compostable films and bags. We can also welcome Mondi Belco NV, the Belgian extrusion coating company of Mondi Group, to our company. With this acquisition, still as this magazine goes to print subject to approval by the competition authorities, we will be able to expand our customer base and strengthen our position in highly specialized engineered materials.

When you set your mind to it, changing your habits is possible. We can all draw inspiration from our colleague Christian Hagedorn, who encountered massive challenges when he was paralysed in a motorbike accident a few years ago. Today he is back at work at Walki’s premises in Steinfurt, much thanks to an attitude of never giving up and always trying to find something positive in everything.

Making change happen is really just about setting your mind to it. And then you need those who can enable the change. That is where we at Walki can contribute the most.

I hope you enjoy our magazine!

Leif Frilund
CEO
With the demand for sustainable solutions on the rise, companies are searching for innovative solutions to make their packaging more recyclable and sustainable. For dairy and dry foods, this means finding an alternative for lids traditionally made of aluminium.

Walki®Lid, Walki’s paper-based material for single-cup lids, hits the nail on the head – or the lid on the cup – for Arla’s dairy products. In Finland, Arla uses the material for its 175 g Arla Luonto+ yoghurts, and in Sweden for cottage cheese and crème fraîche as well. The entire packaging can be recycled by pulping or burned for energy production.

According to Kati Janhunen, Brand & Category Manager at Arla, the aim is to make Arla Luonto+ the healthiest, tastiest and most socially responsible yoghurt brand in Finland. "We’re a very consumer-oriented company and we listen to consumers extremely carefully," she explains. "The consumers that choose Arla Luonto+ deem sustainability very important, so our message is short and simple: the entire package can be recycled as carton."

Janhunen says that Arla is always looking for ways to enable more and more sustainable consumer choices through continuous R&D with sustainability at its core. "Consumers are increasingly interested in ways to make their everyday life eco-friendly. As the packaging industry is constantly evolving, it’s our job to offer them the best possible solutions."

Fibre-based Walki®Lid helps consumers enjoy their snacks with zero aluminium. For global dairy giant Arla, it also provides a way to significantly reduce the carbon footprint of its packaging.

"It’s a common challenge for us packaging manufacturers and our customers to come up with new and innovative solutions to boost the presence of recyclable alternatives and find ways to make them both economical and technically efficient," he says. "The driver for this is consumer demand, and it’s a global phenomenon, so there’s no turning back."

Strong commitment to sustainability

For Walki’s Flexible Packaging Business Line Manager Heikki Lumme and Technical Service and Development Manager Henri Torkkola, the challenges of replacing aluminium in lids are well familiar. However, they both point out that many clients, including Arla, want the entire package to be recyclable, not just the cup.

Walki has been developing its fibre-based materials ever since the 1990s. The company has worked hard to beat aluminium’s good qualities, such as heat resistance, and to create a material that suits existing packaging processes, meets food safety standards and can be printed on. Walki®Lid is the answer to all these questions.

"Consumers are increasingly aware of the impact of packaging and demand recyclable solutions, " Lumme tells. "Thus, brand owners have no choice but to follow suit."

Torkkola emphasises that Walki has always provided paper-based packaging alternatives that are competitive both in terms of cost and properties. In the recent years, the interest has increased significantly – and the trend is set to continue in the future.

"Many demands, one answer"

The lids are manufactured by Pyroll, a paper, converting and packaging company from Finland, using material provided by Walki. Sales Director Marko Manu says that the lid is a bit of a packaging superstar: it has an excellent aroma, water vapour and gas barrier, is easy to peel yet still durable to avoid tearing, and also fully recyclable. On top of all this, it suits the clients’ packaging processes.

"There are plenty of technicalities that need to be taken into account both on our end as well as our customers,’" he notes, "without forgetting the fact that the most important job for the packaging is to protect the product inside it and ensure a certain shelf life."

For Pyroll, Walki®Lid is the first lid in their Pyroll Green concept. Manu believes that there is plenty more to come in the packaging sector when it comes to sustainability. Consumers often think that biodegradable items are eco-friendly, but Manu prefers to talk about recyclability and circular economy.

Consumers are increasingly aware of the impact of packaging and demand recyclable solutions. Brand owners have no choice but to follow suit.
There has been talk about a zero-waste future for a while, and recent developments in recycling might make that a reality in ten years. At least that is Walki’s objective: by 2030, all the company’s materials should be 100 percent renewable or recyclable.

Gunilla Laakso, Category Manager Global Sourcing, and Annika Sundell, Executive President, Innovation, are heavily involved in making this vision a reality. A crucial step is complementing mechanical recycling of plastics by chemical ditto, or what at Walki is referred to as ‘circular polymers’.

Laakso explains:

“When you do circular polymers, you break down the plastic garbage using a procedure called pyrolysis. This means that you thermally decompose the plastic in a high temperature in an inert atmosphere. This pyrolysis oil is thereafter upgraded to be suitable for further processing in crackers.”

The big upside compared to mechanical recycling, where the plastic material is being ground, washed, separated and dried and then made into granules, is that the chemically recycled plastics become as good as virgin polymers. Plastics recycled in a mechanical way leaves impurities in it, hence the grey colour and the odd smell that we all recognize from shopping bags made out of recycled plastics. The mechanically recycled plastics has not been approved to be used in food packaging either. And there are also limitations as to how many times it can be recycled. Using circular polymers, these obstacles are overcome.

“The big upside is that there are no impurities left in the recycled plastic when it’s recycled through pyrolysis, so the recycled plastic can be reused as food packaging, as it is exactly as clean as virgin plastic.”

Another big benefit is that we can recycle used food packaging.

“For instance, when you eat your salad bought from a supermarket and throw the package in the bin, some leftover food always remains in the packaging. That means that the plastic is not optimal for mechanical recycling because the food components decay in the recycled plastics. Using pyrolysis, the leftover food is eliminated. So with circular polymers, we can efficiently reuse old food packaging,” says Laakso.
The big upside is that there are no impurities left in the recycled plastic when it’s recycled through pyrolysis, so the recycled plastic can be reused as food packaging, as is exactly as clean as virgin plastic.

Over and over again
Using mechanical processes, the quality of the plastics will deteriorate every time it’s processed because the polymers become weaker. With circular polymers using pyrolysis, however, you can use the molecules over and over again without compromising the quality.

“The circular polymers have the same quality as virgin polymers,” says Laakso.

So why is the world not using more circular polymers? Eventually that will be the case, says Laakso and Sundell, but first we need large-scale investments in supporting collections systems and in pyrolysis facilities, including those who upgrade pyrolysis oil. Walki has taken the first steps with petrochemical manufacturer Sabic, a long-time partner, and is now in a market foundation stage for introducing circular polymers on the market.

“Hence, we are amongst the pioneers regarding this ground-breaking sustainable solution,” says Sundell.

But it won’t happen overnight. The situation can be compared to purchasing green energy. Energy companies cannot guarantee 100 percent renewable energy in the mix, because the supply of renewable energy is unreliable and inadequate. It’s the same with circular polymers: until there are high-capacity recycling and pyrolysis facilities, you have to make do with what you have.

So the transformation toward circular polymers will be gradual.

“We believe in a so-called mass-balance principle”, explains Laakso.

“It’s an approach to account for materials entering and leaving a system: we cannot say what the exact mix of plastic waste-based cracker feedstock we get is and what the ratio is between it and fossil-based materials. This will change once the world is ready to process bigger volumes. We are now in a transition and using the mass-balance system is a good stepping stone towards 100% bio-based materials.”

All onboard
However, once the needed investments in infrastructure and systems are done, both Laakso and Sundell stress that all parties in the value chain must cooperate. They are, however, convinced that this will happen.

“In fact, it’s happening all the time. The whole discussion on climate change and our waste problem has radically accelerated in the last year. There are a lot of business opportunities involved too, which speeds up things,” says Sundell.

Laakso points out that brand owners and retailers are an important part of this puzzle. Without it, there is no way that EU can implement the strategy.

The politicians can only do their part through. Both Sundell and Laakso stress that all parties in the value chain must cooperate. They are, however, convinced that this will happen.

“You can basically use tall oil based polymers for anything: food packaging, industrial packaging, you name it,” says Sundell.

Polymers based on tall oil are very versatile, and its chemical structure and properties are equivalent to fossil polymers.

“You can basically use tall oil based polymers for anything: food packaging, industrial packaging, you name it,” says Sundell.

Walki is currently in talks with several customers.

“Pyrolysis works in the same way for both fossil and non-fossil plastics”, says Laakso. 3

3 When you do circular polymers, you break down the plastic garbage through pyrolysis. The big upside compared to mechanical recycling, where the plastic material is being grinded, washed, separated and dried and then made into granules, is that the chemically recycled plastics become as good as virgin polymers.
Just about any material can be made retardant to fire today. There are at least 5,000 fire incidents in Europe every day. Hopefully this figure will decrease as more flame retardant materials hit the market.

"Basically, we can take any component and make it fire proof."

The demand for flame retardant products is soaring. "Looking at the past three years, the sales of our flame retardant products have doubled for every year," says Kari Salminen, Executive Vice President, Construction, Walki Group.

Staving off flames is a top priority for Walki. Today, there are technologies to make just about any material retardant to fire – or at least slow down or complicate the burning process considerably.

"Just about any material can be made retardant to fire today."
"Basically, we can take any component and make it fire proof. For example, we can process paper in such a way that it will still burn and turn black, but the fire stops there – it won’t spread,” Salminen says.

Top notch flame retardance is, obviously, a solid sales argument, as customers – real estate developers and construction companies, for instance – are keen on safety. As there are at least 5,000 fire incidents each day in the EU – and each year in Europe approximately 70,000 people are admitted to hospitals with severe fire-related injuries – fire safety issues need to be taken seriously.

**Wanted: A More Comprehensive Approach**

According to Salminen, European flame retardancy classification, ranging from F (the worst) to A (the best), features a range of things that merit consideration; for instance, how the flame is likely to spread in a given material or what type of heat it generates. The testing process is becoming more holistic and comprehensive in nature. This is something Salminen welcomes.

"Previously, each product was tested separately for flame retardance, but that would not really tell us how that product would perform in a scenario where the entire building is on fire. We need to test the entire system, instead of just focusing on the individual components."

**Innovating with flame retardance in mind**

Pilot tests with flame retardance development are mainly conducted on the pilot line at the Walki Competence Center in Pietarsaari, Finland. Most of the production trial runs are done in VALkealoski in Finland. This is also where existing flame retardant products are produced.

"Development of the product is done in close cooperation with raw-material suppliers and customers,” says Technical Service and Development Engineer Heikki Viitanen.

Quite often the products are multilayer laminates that contain many different types of raw material like paper, polymers, aluminum and glass. "To make the end product fire-safe those layers have to be made flame retardant,” says Viitanen.

According to Viitanen, flame retardant products are top priorities in the construction facings area.

“One of the challenges is the suitability of flame retardant raw material from the perspective of the end use of the product. Also, the testing and certification of flame retardant products pose certain challenges.”

**More Products in the Market**

In recent years, regulation changes have increased the demand for fire safe products in the construction business. "During the last couple of years, there have been more flame retardant raw material suppliers available," says Viitanen, adding that Walki has been developing flame retardant products and working with flame retardant raw materials for at least 10 years now.

Vititanen believes that the biggest markets exist in construction facings and construction membranes product segments. "Additionally, there is also some demand in industrial packaging applications. The evolution of product fire safety will continue in the 2020’s."

In the coming decade, Walki is likely to introduce even more flame retardant solutions.

"Flame retardant products will replace the current standard products in many end use areas," he predicts.

**Embracing flame retardant product families: Print Media XXL & Barrier Lining**

One after another, Walki's product families are turning towards amore fire safe future.

Global Category Manager Luk Meys from Walki’s Print Media XXL product family says that for two out of three products (Walki® Billboard Pro and Walki® Billboard Stretch), there is a stated need to develop a flame retardant alternative.

"This is important in order to be able to take market share for indoor applications such as point of sale or point of purchase, and trade fair graphics."

Meys believes that the market demand will only increase from the present situation.

"Customers will see it as a necessary feature, and in some countries like France it is already mandatory for public indoor applications."

With the Print Media XXL family, flame retardance is an ongoing process and the ultimate solution is still under development.

"It's a development we have to do together with our raw material suppliers (nonwovens). The materials onto which we coat have to meet the flame retardant requirements," Meys says.

Walki has developed, together with a master batch supplier, a polymer coating that has shown great promise.

**Flame retardant honeycomb board**

According to Fagerhol, Walki's barrier lining products, Walki's customers manufacture a honeycomb board that features Walki's flame retardant barrier lining. The honeycomb board can be used, for example, as lightweight construction material for exhibitions, 'shop-in-shops' and indoor displays.

"This flame retardant barrier lining could also be used for specific corrugated board or softboard packaging solution where final end user has specified a certain flame retardant requirement," says Jan-Anders Fagerhol, Sales Manager for Barriere Lining, Nordic.

According to Fagerhol, there have been similar products on the market for a long time already, but Barrier Lining says that the time was right to add some Walki expertise into the mix.

"Our product is more tailor made to meet our customer's need," he says.

Previously, each product was tested separately for flame retardance, but that would not really tell us how that product would perform in a scenario where the entire building is on fire.
AN ACQUISITION FOR AN EVEN MORE SUSTAINABLE FUTURE

By acquiring Finnish sustainable packaging material producer Plastiroll, Walki adds to its ever-increasing offering of sustainable packaging solutions.

I you've a Finn and haven't heard of Bioska and Hauska, you were probably born yesterday. That's how much of a household name the two biodegradable bags have become: Bioska for biowaste, Hauska for dog poop.

However, there's much more to the Ylöjärvi-based company Plastiroll than its most well-known consumer items. In addition to being one of the leading producers of biodegradable bags and films, it also has dispersion coating technologies will continue to rise around the world as recycling gains access to research and development resources as well as larger sales networks. In that sense and in this case, one plus one adds up to more than just two.

Walki’s EVP, Innovation and Director R&D, Qualit, Anna Kari Laukkanen, says that the integration phase has looked promising, as the two companies complement each other. "Walki adds to its existing offering, and Plastiroll gains access to research and development resources as well as larger sales networks. In that sense and in this case, one plus one adds up to more than just two.

"Plastiroll is taking part of Walki gives Walki's customers an easy access to a new range of materials. Laukkanen says that the integration phase has looked promising, as the two companies complement each other. "Walki adds to its existing offering, and Plastiroll gains access to research and development resources as well as larger sales networks. In that sense and in this case, one plus one adds up to more than just two.

"Brand owners are enthusiastic about replacing plastic with greener alternatives, so we could call it a trend particularly when it comes to consumer products," Laukkanen adds.

"Plastiroll isn’t the only great thing about Plastiroll's products. Avellan points out that the breathable material has functional benefits as well, as it adds to the shelf-life of certain products. Many non-food items don’t really need to be wrapped in a breathable packaging, but many don’t mind it."

"For example, publishers want to pack magazines in biodegradable material to show their commitment to green values," Avellan says.

"We already have a large portfolio of sustainable materials and we intend to further expand our platform," Sundell tells. "Everyday is connected with our commitment to the circular economy and a Zero Waste Future."
The eco-conscious millennial generation is driving change across various industries. The Out-of-Home (OOH) Advertising sector needs to take note.

The Out-of-Home (OOH) Advertising sector prepares to phase Polyvinyl chloride (PVC) plastic out of its banners and billboards. Walki’s sustainable billboard material offers solutions to this challenge.

“We have known for years that PVC is harmful to the environment, but only recently has the anti-PVC movement really started gaining momentum,” explains Luk Meys, Walki’s Global Category Manager, Imaging.

“Modern consumers want to identify with brands with a strong environmental profile, who are transparent about the materials they use, and how their advertising is done,” he says, adding that millennials in particular are ready and willing to pay more for products that are made, distributed and advertised in a sustainable manner.

“These people are aware of the dangers of PVC and more likely to spend their money with a company that doesn’t use it in its advertising,” he explains.

Back in 2003, finding a viable alternative to PVC would have been quite a challenge, but, these days, Walki has the solution, with its Walki®Print Media XXL family of products, which provides sustainable printing and imaging solutions.

Green printing and imaging from Walki

Using ultra-light, tear resistant and recyclable raw materials, this ‘green’ print media combines specific base materials and functional polymers. What is more, it weighs less than half as much as traditional PVC products, making transport, storage and handling far less cumbersome. Apart from being PVC-free and phthalate-free, Walki®Print Media XXL is also 100 percent recyclable, halogen-free and REACH-compliant, which means that it complies with EU regulation regarding registration, evaluation, authorisation and restriction of chemicals.

Walki will soon be rolling out further improvements to this family of products. In the near future, the Walki®Print Media XXL range will be suitable for printing with environmentally sound, water-based latex ink next to the current printability with UV inks. The next generation of the product will also be certified flame retardant, making it suitable for indoor use in public places. Even further down the line, plans are in place to pursue the introduction of a bio-degradable generation of the print media.

“Walki is constantly looking for ways to help its customers improve their environmental performance and these products will be key to ensuring a more sustainable future in the OOH segment. Producing them locally in the European market, close to our customer base, also adds important value,” concludes Meys.

“We are ready to help the Out-of-Home Advertising sector prepare for a future without PVC,” says Luk Meys.

Modern consumers want to identify with brands with a strong environmental profile, who are transparent about the materials they use, and how their advertising is done.
Have you heard of a sustainable toaster called The Burning Machine? Or a fully composting shoe brand The Dominator? Maybe not yet, but the students from Drumsö Lågstadieskola in Helsinki have some interesting circular product innovations lined up for future consumers.

The Circular Classroom in action
Berlin’s class has actively used Walki’s social responsibility program, the educational platform Circular Classroom, when digging into the topic of circular economy. The children have for example made product autopsies. “It was inspiring to get a task in which we broke an object into pieces and re-designed it. It proved how the linear economy rules, as most of the electronics were impossible to recycle. That was not so good”, says Rasmus Ivars. Johanna Berlin finds it important to teach sustainability on many levels. “Most schools do teach sustainability today with theme weeks in school. Quite often we tend to focus on how we should sort our waste. It is easy to approach and connects to everyday life at home. But how can we take it to the next level? It is good to also teach creativity and design understanding, how design is more than just mere shapes and products, it is linked to the whole value chain and product lifecycle. Circular Classroom gives good hands-on tools to do this.” Milo Laurent has already his eyes set on his future work life. “I would say it’s important to understand these things if one wants to work in business life. You need to care for the environment and understand what the circular economy is about.”

Designing the future
In spring, the school gathered several classes together for a product workshop. Each group was asked to design a new product for the market, with the circular economy in mind. Each product was presented and evaluated by critical classmates. The children have a good sense of how things should be done; the products ranged from recycled and recyclable mobile phone where all parts can be replaced to fully compostable shoes. The Burning Machine toaster uses solar energy as a power source through the kitchen window. It is made of recycled metal and is round-shaped to remind us of the circular economy. Milo Laurent’s team was looking at the whole value chain. “We designed a bottle made of paper, so that you can recycle it along with other paper waste. We only use renewable energy when producing the bottle. We sell our own drink, but we can sell the bottle to other manufacturers, too.”

It is clear that the future generation has its mind set on making better design for a better future. As Amanda Hickersstedt, a 12-year-old girl, wisely points out: “I’ve learnt that there are so many products that you can’t recycle. It makes me think about how to act in a more sustainable way.” Mühlner wants to teach kids to think about sustainability from multiple angles.

Johanna Berlin wants to teach kids to think about sustainability from multiple angles.
Who does not love a disposable plate on a picnic? And now those plates are increasingly made out of paper.

Mini-Maid has plates for every occasion and they are all plastic-free, recyclable, compostable and biodegradable.

"Barrier materials are typically costly and not as recyclable as paper so the trick is to use a available barrier that delivers maximum protection with minimum raw material use," he says.

"We’ve worked with Walki since the mid 1990s and are very happy with its barrier solutions," adds Grahn. We’re currently looking to take the next step in our plastic-free journey together, by developing a plastic-free printed paper plate."

Despite increasing resistance to all kinds of single-use products, demand for disposable goods is still continuing to grow. Mikael Grahn believes this is mainly due to the lifestyle choices of young people today.

"Modern consumers want convenient, easy-to-use products, but also prefer to shop sustainably whenever possible. This is good news for Mini-Maid," he says.

EU bans single-use plastic from 2021

Looking to the future, paper has a major part to play as regulators prepare to crack down on plastics. A new European law was recently passed banning single-use plastic products including cotton bud sticks, cutlery, straws, stirrers and plates. It will come into force across all European Union member states by 2021.

"Some four to five billion paper plates are sold in Europe every year, compared to more than 20 billion plastic plates. While we can’t predict how the market will evolve, it goes without saying that the future looks brighter than ever," says Grahn.
Driving a car again was a major achievement for Christian Hagedorn.

Christian Hagedorn joined Walki Germany’s accounting department in 2008 and was later promoted to the role of business controller. On a sunny day in June 2013, on his way home from work, Hagedorn had an accident, fell off his motorbike, and, as he was falling, hit his head on a street sign.

“I knew from the first moment that I was paralysed. I was looking into the sky, waiting for the paramedics to arrive, and all I could move was my neck,” he recalls.

Hagedorn spent eight months in hospital, undergoing multiple major surgical procedures, as well as a very intense rehabilitation programme that is still ongoing today.

“During the first few days, I had a lot of negative thoughts that varied from worry and fear to fury,” says Hagedorn. “But then, at some point, I realised you have to decide how you want to live your life: you can either give up or confront it. And giving up was never an option for me.”

Hagedorn recalls that seeing his family and his girlfriend – who is now his wife – next to his bed, made him all the more determined to get his life back. So he started setting targets for his recovery. Every day he gave himself a series of small objectives to achieve – something he is still doing on a daily, weekly and more long-term basis.

Giving up was never an option for me.

In 2013, a motorbike accident left Christian Hagedorn paralysed from the shoulder down. Today, he is back at work part time and awaiting the birth of his first child. He shares his story.

3 top tips for staying positive

1. Set targets to get focused on something constructive. First of all, you need an overall target, such as “I want to be independent in my daily routines”, then you need to set a series of small targets that you can achieve on a day-to-day basis that will enable you to reach the long-term objective.

2. Keep busy. Meet friends, go for a walk, watch TV, distract yourself and stay focused on anything except your depressing situation.

3. Try to live as normal as possible.

The injury to Hagedorn’s spinal cord affected the fourth to the sixth cervical vertebrae, causing total paralysis from the shoulder down. At present, following six years of rehabilitation therapy, he has regained some limited movement in his biceps, wrists and shoulders. He has also achieved a number of important milestones.

“One of my greatest achievements is being able to drive a car again!” he exclaims. “I have a Volkswagen T5 multivan that has been converted to enable me to open the doors electronically and drive in and position my wheelchair directly beside the steering wheel. I accelerate and brake with my hands and do nothing with my feet.”

Hagedorn and his wife live in a fully wheelchair-accessible house with their baby girl. Between his limited movement and the adaptation of the house, Hagedorn is now able to manage his daily routines independently. In 2017, he decided to go back to work at Walki on a part-time basis.

“I became aware that it would give me a massive mental boost if I could go back to my old life to the greatest extent possible,” he says, adding that he is currently working three hours a day, three days a week, and that both the company and his colleagues are being extremely supportive.

Hagedorn is also working on a project to develop a fully wheelchair-accessible mobile home, in collaboration with the same company that converted his car.

Going on a holiday with a wheelchair, a dog and a baby is complicated, so I want to find a way to be able to travel independently”, he explains. “I took the vehicle on a test run to Spain in April. It was my first independent holiday since the accident and it was just great!”

### FACTS

- **Name:** Christian Hagedorn
- **Age:** 35
- **Lives:** in a fully wheelchair accessible house in Greven close to Muenster in Germany
- **Family:** wife Mona, dog Mito and baby girl
- **Personal motto:** The easiest route isn’t always the best
We contribute with our actions

In service of the next generation.

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