

# P3

Paper Print Packaging

» **Paperazzo**

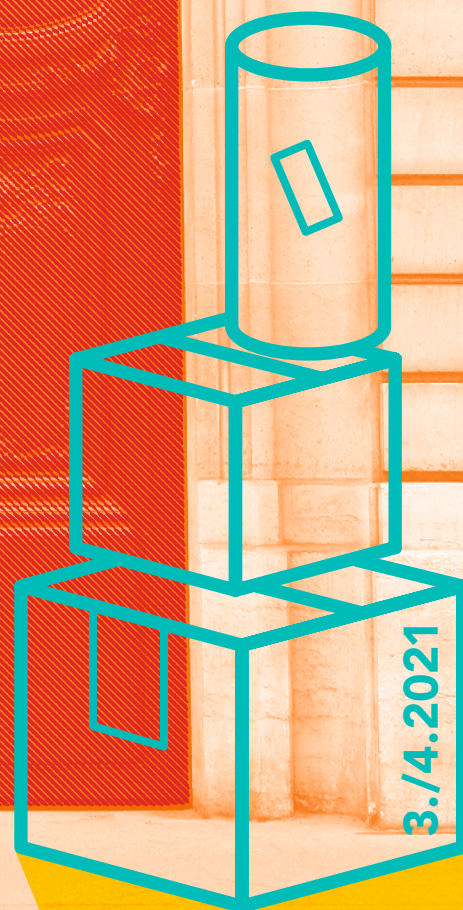
» **Druckspiegel**

» **ipw** *bio-fibre* MAGAZINE

→ 4EVERGREEN:  
**Perfecting  
Circularity  
Together**

→ SPECIAL PAPER:  
**From Cloud to Paper**

→ GOING BOWIE:  
**Talking to Grammy  
Winner Jonathan  
Barnbrook**





**One  
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different  
perspectives**



**P3**

**Paper Print Packaging**

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## Doubt is the main driving force behind progress.

Georges Cuvier



### Dear Readers,

the song of sustainability rings out in unbroken tones around the globe, sung by industry, associations and politics alike. Where there is incentive, however, a lack of transparency tends to creep in in the competition. That doesn't have to mean anything bad, but it can be intentional. A company advertises its sustainable packaging product by saying that pulp made from 100 percent recycled paper is now being used. If one reads the entire communication and puts the details together, it turns out that the pulp required for this is carted in large quantities from France to Poland. When asked, the editors find out: Well, there is actually still room for improvement, but ultimately it's about quality. – Then one should emphasize the quality, not the dubious sustainability!

In general, when it comes to circular economy, people tend to forget – or rather, reluctantly mention – that the recycling of paper fibres is currently limited to around seven runs (plus x). Laboratory tests at the TU Darmstadt, Germany, have already shown that significantly more should be possible – but the challenges come already at an earlier stage: the filtering out of impurities and contaminants while trying to minimize fibre losses at the same time. This in turn often starts with the consumer; in the paper bins there are bags full of plastic waste, residual waste, tin cans and bulky waste. But also mountains of composite materials – often unabashedly advertised as sustainable – can be found. Here, too, is indeed still a lot of room for improvement. And with all this, one shouldn't forget that actual sustainability also means: doing without!

Have a great read & stay safe!

**Stefan Breitenfeld**  
Editor-in-Chief

# P3

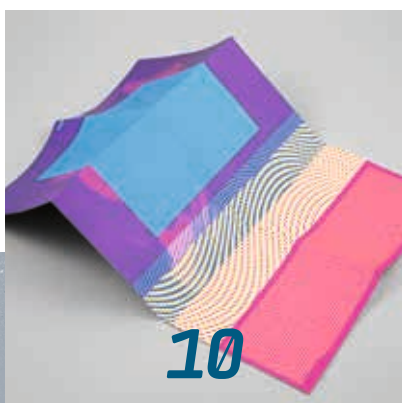
Paper Print Packaging

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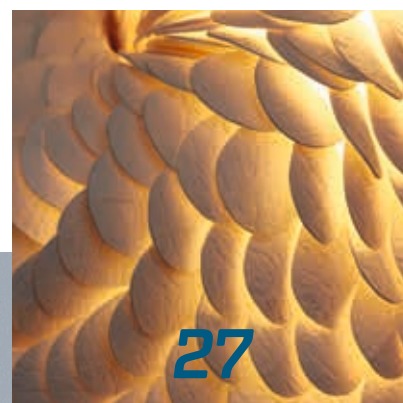
3./4.2021



**Paper & People**  
*The Graphicdesigner*  
Jonathan Barnbrook



**Package Printing**  
*Defender Print Inspection*  
Workflow



**Packaging**  
*The Beauty of Paper and Art*  
Coming Together



**Special Paper**  
*From Cloud to Paper*



**Finishing Technologies**  
*Advantages in Competitive*  
Markets



**Events**  
*Review: virtual.drupa 2021*





1. *Paperazzo* reports about diverse types of paper, discerning finishing and printing processes. It is the trade magazine for paper decisionmakers, print buyers, creative printers, agencies, publishers and producers of branded goods.



2. *Druckspiegel* is the leading trade magazine for decision makers in the print and media industry operating in the German-speaking area. It reports about the most important technical and economic developments in the industry.



3. *ipw* reports on pulp & paper producers, their suppliers and international activities as well as sustainability. bio-fibre magazine covers new kinds of paperlike materials and biocomposites or bioplastics based on wood fibres.

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## Sappi Europe

### New Vice President, Marketing & Sales

Sappi Europe announces the appointment of Flavio Froehli as Vice President, Marketing & Sales with immediate effect for the entire Sappi Europe portfolio reporting to Marco Eikelenboom, CEO, Sappi Europe.

Flavio holds an MBA from University of Minnesota and Vienna University of Economics & Business. He is an experienced marketing & sales executive with an extensive background in the Paper, Packaging & Pulp industry, who joined Sappi as Sales Director, Graphics, with the acquisition of M-real Graphics in 2008. Since then, he was involved in several change initiatives. \\\



## Andritz

### Major Expansion of the OCC line for NORPAC

Andritz has received an order from North Pacific Paper Company (NORPAC) to supply a major expansion of the OCC line for its mill in Longview, Washington, USA. Start-up is scheduled for the first quarter of 2022.

Andritz will install a FibreFlow drum pulper, type FFD450EE, as well as various fiber cleaning and reject handling equipment to upgrade the existing OCC line and expand the mill's production of lightweight recycled packaging papers. The stock preparation system features a capacity of 1,200 bdmt/d and processes a mix of OCC and mixed waste as raw material. The FibreFlow Drum pulper is a complete pulping system in one unit and ensures best accept quality thanks to the gentle pulping concept and efficient removal of coarse contaminants with minimum fiber loss. \\\



## Mondi

### New Recycled Containerboard Machine in Slovakia

Mondi is supplying customers with its innovative and sustainable containerboard grade made in Slovakia from renewable materials. Kraft Top White combines the strength, printability and appearance benefits of a white fresh fibre top layer with the advantages of a recycled fibre bottom layer.

State-of-the-art paper technology increases strength while reducing weight, making Kraft Top White a compelling solution for the growing European white top liner market for use in shelf-ready packaging, point-of-sale displays, trays, e-commerce packaging, consumer

durables and other customised packaging applications. The Ružomberok mill enjoys a central location in the growing European containerboard market and can therefore offer reduced delivery lead times to customers across Europe for these new paper solutions.

The mill has an annual 300,000 tonnes Kraft Top White capacity. Production of

the two Kraft Top White grades – ProVantage Smartwhite and ProVantage Topwhite – has been ramping up since PM19 started-up in January. At full capacity, the machine will use more than 200,000 tonnes of paper for recycling per year (mainly from Slovakia), opening new processing capacities and supporting the circular economy by keeping materials in circulation and preventing waste.

"Mondi's purpose is to contribute to a better world by making innovative, sustainable packaging and paper solutions. Our new paper machine in Slovakia enables us to offer customers a high-quality new containerboard solution, while further improving the environmental footprint of our Ružomberok mill," says Markus Gärtner, CEO Corrugated Packaging at Mondi. \\\



## Stora Enso

### Partnership With Vogue Scandinavia

Stora Enso and Vogue Scandinavia have formed a strategic partnership to replace plastics in magazine packaging. A renewable, carbon neutral eco-package concept will be available for the first issue of Vogue Scandinavia, to be published in August this year.

As a part of the partnership, Stora Enso will provide Vogue Scandinavia with renewable magazine packaging, along with packaging design and automation services. The Vogue Scandinavia magazine packaging aims to be fully carbon neutral, with a renewable, low-carbon raw material and energy efficient production. The remaining emissions are offset by using the CarbonZero service by Stora Enso, in collaboration with compensation partner South Pole.

Stora Enso will provide Vogue Scandinavia with advisory services for sustainable materials and cradle-to-grave life-cycle assessments. Stora Enso will also support Vogue Scandinavia in transparent sustainability reporting.

"Together with Vogue Scandinavia we want to respond to the increasingly eco-conscious fashion audience's push for a greener world", says Ulrika Lilja, EVP Communications and Marketing at Stora Enso. "With renewable materials, circular design and carbon neutral technologies we make this a reality starting with the first issue of Vogue Scandinavia." \\\



ICFPA

# Global Sustainability Progress Report

On April 29th, the International Council of Forest and Paper Associations (ICFPA) released its biennial Sustainability Progress Report which demonstrates progress in seven key areas of sustainability.

The ICFPA serves as a forum for global dialogue, coordination and co-operation among 18 pulp, paper, wood and fibre-based associations across 28 countries. Cepi represents the European voice within the ICFPA: Jori Ringman, Cepi Director General, is a member of the ICFPA steering committee.

The 2021 ICFPA Sustainability Progress Report shows progress on nearly all of the sector's performance indicators, using the most recent data available (2018–2019). The 2021 report also highlights the forest products sector's global response to the Covid-19 pandemic.

"The ICFPA sustainability progress report shows that the forest-based industry can make the green transition happen, not only in Europe pushed by the ambitious European Green Deal but also at global level. The European pulp and paper industry's priority throughout the Covid crisis has been to ensure that EU citizens can access the products they need for hygiene, health and food purposes. We offer immediate and affordable solutions to build a climate-friendly and sustainable society," commented Jori Ringman, Cepi Director General.

Key progress on ICFPA's sustainability performance indicators include:

- In 2019, 52.6 percent of procured wood fibre came from third-party certified sustainably-managed forests, a 41 percentage point increase from the 2000 baseline year.
- Greenhouse gas emission intensity decreased 21 percent from the 2004/2005 baseline year.



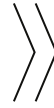
ICFPA has released its Global Sustainability Progress Report.

- The energy share of biomass and other renewable fuels increased to 64.9 percent, a 12 percentage point increase since 2004/2005.
- Sulphur dioxide emission intensity from on-site combustion sources decreased 77 percent from the 2004/2005 baseline year and 38 percent from the previous report.
- Water use intensity decreased 12.5 percent from the baseline year.
- Investment in health and safety interventions yielded a 30 percent reduction in the global recordable incident rate from the 2006/2007 baseline with the number of recordable incidents falling to 2.88 per 100 employees annually.
- In 2019, 59.1 percent of paper and paperboard consumed globally was used by mills to make new products, marking a 12.6 percentage point increase in the global recycling rate since the year 2000.

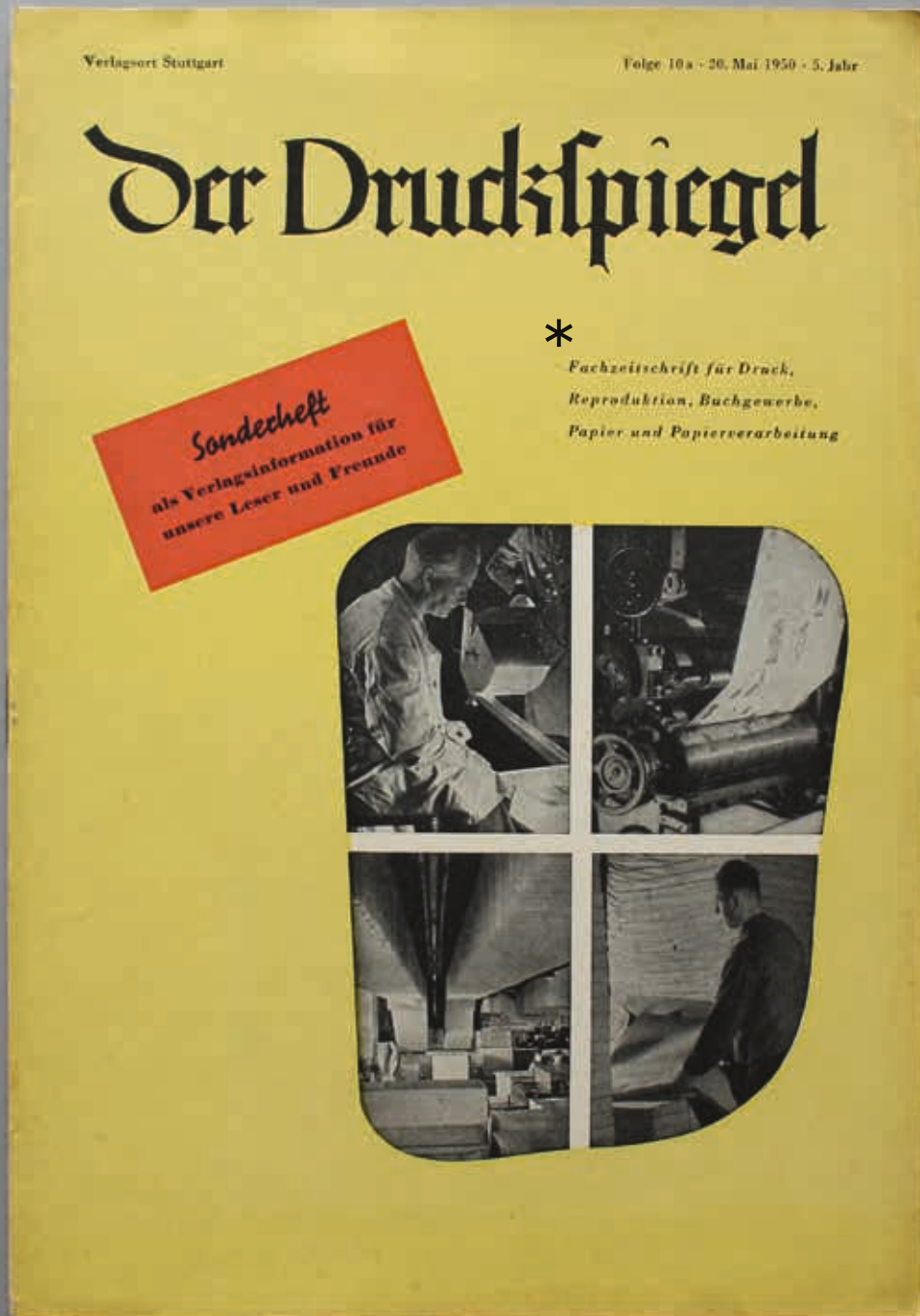
The 2021 ICFPA Sustainability Progress Report also includes the 2021 International Finalists for the prestigious ICFPA Blue Sky Young Researchers and Innovation Award. The theme for the 2020-2021 Blue Sky Awards was "Boosting the Forest Bioeconomy: Nature-Based Solutions Toward a Lower Carbon Economy".

Every year, Cepi also holds its Blue Sky Young Researchers Award contest, an opportunity for forest sector researchers and professionals to showcase how their game-changing ideas, practices, processes, and technologies are advancing the global bioeconomy while sustaining the natural environment. The European laureates are automatically submitted to the global ICFPA contest. |||

FLASH  
BACK



We do open our morgue and look back ...  
here a Special Edition of Druckspiegel  
from May 1950.



\* „Fachzeitschrift für Druck,  
Reproduktion, Buchgewerbe, Papier und  
Papierverarbeitung“





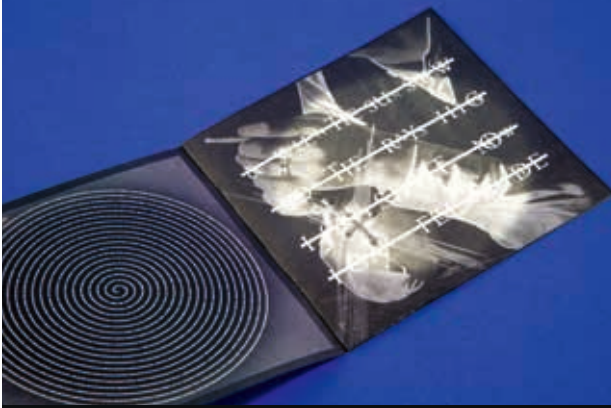
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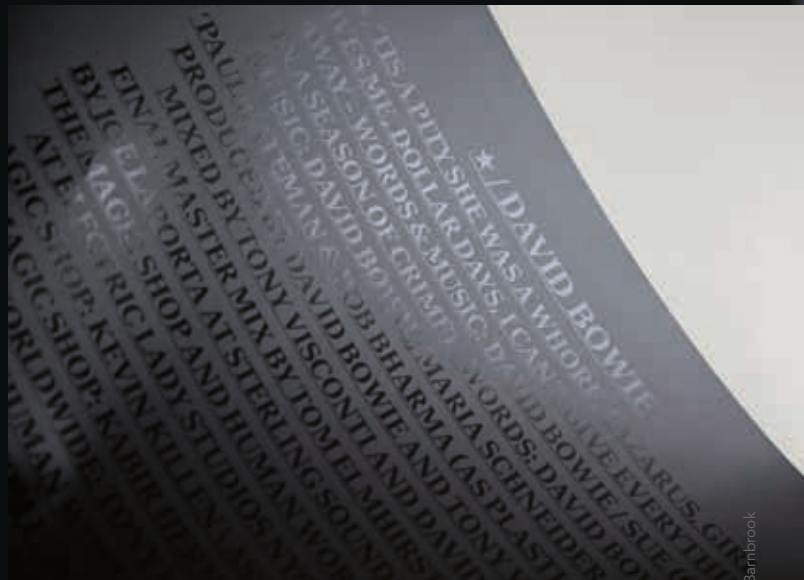
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Grammy Winner

# ”TRY AND CHANGE THE WORLD!”

Sometimes chances come out of nowhere. You only have to take them. I admit I was pretty excited when my paths happened to cross with the ones of Jonathan Barnbrook – the man who was responsible for the artwork on David Bowie’s last four albums, amongst other things.



Barnbrook did the artwork for David Bowie’s last four albums, including “The Next Day”.





Jonathan Barnbrook: "Make the first experience working with you enjoyable and people will come back."

One size too big? No! Mr Barnbrook turned out to be a modest English gentleman – albeit with a Grammy on the bookshelf.

**Let's start at the beginning: Your Wikipedia entry describes you as a graphic designer, filmmaker and typographer. What brought you into this industry and how was your career?**

The way into graphic design, in which I work as film maker and typographer was through record covers. It was the first 'art' I came into contact with and I used to copy them and the band logos meticulously. I had always loved art and I sat down with my art teacher at school and he asked me what I was going to do when I left. I was planning some kind of technical drawing job and he said 'Take a look at graphic design, this is what you are'. And he told me about what designers do and the different possible things to study. So really I have him to thank for going on this path. I was at a fairly tough school, so not everybody was so lucky in their path when they left school.

**In the course of your career, the technical requirements for designers have changed significantly. Do you prefer to work with paper on design projects or do you prefer a digital approach? Can you still choose that at all?**

Yes, the introduction of the computer has been one of the most fundamental changes. I feel lucky that I learnt how to draw and design the traditional way, although I don't miss doing artwork at all, it was SO tedious, spacing type or putting it on a curve by hand or the things you would have to do if you made a mistake. I remember when I

sat down at a computer at my art college in 1985, I just couldn't believe how much you could do with it. It was very primitive by today's standards but extremely liberating.

Having said that, I sometimes have to draw stuff by hand to work them out directly, it can help the form of something by simply using the sweep or stroke of a pencil.

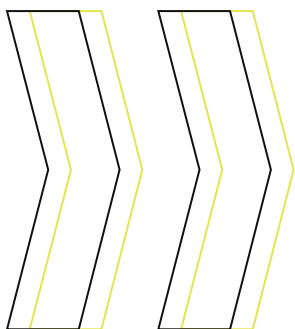
**Does digital work seem more impersonal to you?**

No, no method seems impersonal, it's the thinking that goes into using the technology or tool that is important. Digital is not just a replication of traditional crafts, it brings a new way of thinking and approaching. To use a parallel: Electronic music can be as passionate and emotional as acoustic music – and it is also different and has its own character – and it is the same in design with the methods you use.

**How do you start a new project? Can you explain your way of working to our readers, perhaps with a special focus on the differences between analog and digital approaches?**

The analogue part is the 'thinking', which is usually quite fuzzy, the computer is the thing to bring that into focus. That is one of the things the computer does best – but it is also its worst feature. The idea or solution takes a while to germinate in your mind, it's kind of nebulous. You draw it on the computer and it is there in naked black and white – and usually looks terrible. What the computer is doing: enabling you to refine it. That simply was very difficult before computers, you had





**THE MENTALIST**

SIMONE BAKER  
JOHN WATSON

In A Season Of Crime  
04:40/02 Girl Loves Me  
04:51/03 Dollar Tree  
04:44/04 I Can't Love Everything Away  
SAS

dern way. I also noticed that all of these at some point either drew or had drawn custom type – this for me is quite fundamental in being able to create the world of music in a visual form. A custom typeface is like a specific visual voice of the music, so I feel it is quite important - so I draw typefaces and also create things specifically for music projects I work on.

**You designed the covers of David Bowie's last four studio albums: *Heathen*, *Reality*, *The Next Day* and *Blackstar*. How did this collaboration come about?**

I worked on a book for his wife, the former model Iman. He went around London talking to different design groups and chose me. I put my heart and soul into it because as well as wanting to do a good job I wanted to open up future possible options of working with Bowie. The best way to get work is repeat business. Make the first experience working with you enjoyable, positive and creative and people will come back. This is why I always say you need to like people to be a gra-



So day to day, creativity is still a struggle – as it should be if you want to be good.



phic designer. As the interaction is really important and if you have a tantrum, are not pleasant then they won't come back no matter how important you think.

**You won a Grammy for your work on Blackstar and were nominated for The Next Day. That sounds like a decisive experience. Did the phone ring every minute after that? Does something like that raise the bar or does it even change the way you work?**

I tend not to think about it too much, most important is to do good work. I am not really into 'awards' and hardly ever enter them. So it hasn't made one bit of difference. Having said that, this one did mean a lot to me because it wasn't something from just inside my profession but from the wider world. The award was good for visibility but also a few people said to me that they wouldn't consider employing me because I would now be too expensive (ha) – which when you look at some of the smaller artists I have worked for is obviously not the case – if a job is interesting then there is flexibility with a budget. I think the most interesting jobs throughout the history of graphic design have been done with restrictions of technology or budget. It's being able to use these restrictions in a positive way that is the mark of a good designer.

Relationship to creativity is a complex thing. I am not necessarily happy when I finish a piece of work. There is always that trying to attain something better inside you. It's only about 10 years later that I can have enough distance to see if

a piece of work is good or not. So day to day, creativity is still a struggle – as it should be if you want to be good.

**You currently live in London. But Grammy Award also sounds like Hollywood, villa and jacuzzi ...**

It's on my bookshelf in London. Er ... nothing more than that. I do remember the weirdest part of the ceremony was that there was a crowd of seated people I walked past, and they clap your name and cheer as it is announced – I went up to them and asked why they were doing that when they had no idea who I was, and one guy said 'this is Los Angeles, this is my job and this is what I am paid to do'.

**If you're designing a cover, do you want to hear the music before you take the job?**

I don't need to hear the music but I do need to connect with the artist in some way, otherwise I worry I won't put my heart into it. So before we get to the point of agreeing to do a specific album I have to know the artist and understand something about their creativity. So I do tend to work with artists whose music I understand and like as it makes a big difference to your energy and enthusiasm.

**You are known for using design to give answers to political events. Do you think people are listening to such statements nowadays, or is it just a method to let the frustration out?**





With his band Fragile Self, Barnbrook combines the two things he loves most: Electronic music and design.

((

The Fragile Self book: 480 pages of original photography, selected text, original artworks and cutting edge design. This photo was taken from the chapter "Deperson".

The answer to this is 'Yes' – to both. I think there is a natural human reaction to want to express frustration so they are made for this purpose, but also if you look through the history of protest you will see that graphic design has been the main use of carrying messages – placards, posters, leaflets, now digital. So it is a very effective force in politics.

**Talking about politics, was it – in your opinion – the right decision to lead Great Britain out of the EU? Or did Boris Johnson do damage to the country just to stage himself?**

I am a committed European and still remain so, I feel very disconnected with Boris Johnson, although because most politicians don't appear to have much personality I can see why people are into him. I don't understand the British people, it seems like they are masochists. We have the royal family – which guarantees that the class system will be with us – that support all of the private school educated, rich men who simply don't understand what it means to have no money. This is all supported by the poorer people (I come from a poor working class family). So they are willingly consenting to being repressed. At some point I may leave the UK and live somewhere in Europe.

**Back to design and typography: Is designing your own fonts something that can still pay off**



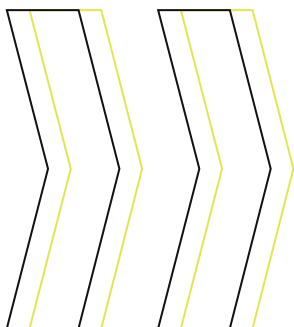
**these days? There are thousands of fonts on the web – how can you make a difference?**

It's a major investment making a font. So I tend to do it rarely as the time taken to produce one that can be used for text, has all of the characters for different languages – all spaced and drawn correctly – can take a very long time. The only time that recently I have done it is as part of a branding identity or actually for a Bowie album – I drew a new font for 'The next day' because I wanted it to be part of the 'newness' of releasing that.

**What advice would you give to a newcomer to the industry?**

I haven't a clue! 'Be stupid, don't think too much, try and change the world' is probably as good as





anything as you will take more risks in doing the work you really want to do. You only have one life.

**Final question: family, hobbies, job, vocation – what are your priorities and what can we expect from you next?**

I am 54, so honestly I can see the end of my life coming. I am still motivated to do good work, but I would like it to be more on my terms. Being a graphic designer is tough, people see you as a 'service' rather as an artist – I would hope by now for a little more understanding from people who know what I am doing. Secondly, a little more time to concentrate on my other love which is electronic music. It is the reason I became a graphic designer in the first place with bands like Kraftwerk and seeing their record covers. So space to do that and mix it with design is the ultimate thing. I have just started with the release of the first album by our band Fragile Self – [www.fragileself.com](http://www.fragileself.com).

**Jonathan, thanks a lot for the interview! |||**

[www.barnbrook.net](http://www.barnbrook.net)



Adbusters: First Things First (2001).

### Adbusters: First Things First

Jonathan Barnbrook was one of original signatories of the revised First things First manifesto that was reissued by Adbusters in 2000 and signed by 33 leading visual communicators. The original was written by Ken Garland in 1964. The manifesto called for meaningful design and questions the role of designers in society. Barnbrook designed Issue 37 of Adbusters 'Design Anarchy' and completed several other associated works discussing the themes of the manifesto including this billboard. This was put up in Las Vegas to coincide with the AIGA (American Institute of Graphic Arts conference). The billboard states "Designers, stay away from corporations that want you to lie for them" – A quote by Tibor Kalman.



North Korea: Series I – Building the Brand (2001).

### North Korea: Series I – Building the Brand

A project completed for a South Korean 'Design' magazine about issues surrounding the dictatorship of North Korea. The work does not just criticise the regime but compares it to our own ideas of freedom in the West. The project also tried to give hope that the power individuals have over dictatorships.



## Interview

# ***“The Shelf-Life of a CEO did not Seem to be Much Longer Than 18 Months.”***

Marco Eikelenboom has been appointed as CEO of Sappi Europe from April 1st, succeeding Berry Wiersum who retired at the end of March. We took the opportunity of having a short interview, talking about the Thrive25 strategy, challenges to face – and some football.

**C**ongratulations for being appointed as CEO of Sappi Europe! Is that something you thought of when joining Sappi?

Having started as a Management Trainee with one of the predecessors of Sappi, KNP BT, I rather quickly had my first interaction with the coming and going CEOs at that time and I started to realize that the shelf-life of a CEO did not seem to be much longer than 18 months. The fact that strategic moves, unfortunate choices or overestimated capabilities have severe consequences for a CEO has always intrigued me and made me wonder how I would do in such position.

**What were the previous stations in your career?**

As stated before, I started as a Management Trainee with KNP Fine paper in Maastricht, after which I had the fortunate experience to be sent to Paris to become a Sales Manager for the newly formed company KNP Leykam. In 1997 this company was acquired by Sappi and I moved to Brussels to become the Manager Corporate Planning in charge of the Post-Merger Integration. Soon after I became the MD of Sappi Benelux and in 2002 I was asked to take over the position of Marketing Director for Sappi Fine paper in South Africa and moved to Johannesburg with my wife and our three sons. Since 2005 we are back in Brussels where I worked in Sappi Europe's Head Office as the Vice-President of Marketing & sales for our Graphics paper products.

**Steve Binnie (Chief Executive Officer, Sappi Limited) said that he was pleased to be “able to ensure a smooth transition in leadership”. Does that mean you’re going to follow the path led out by Berry Wiersum, or do you have adjustments in mind?**





- 1 Sappi's Stockstadt mill by night.
- 2 Marco Eikelenboom, new CEO of Sappi Europe.

newable resources, so our awareness of just how we can play our part in reducing the effects of climate change and the shifts that brings to the business is acute. We are making great headway in our journey, but it is a long road with serious investments to be made available to cope with the ever changing and tightening requirements.

**What forms of contact with your customers have proven effective during the Covid-19 pandemic?**

Sappi is a business that prides itself on the interaction and partnership we create with our customers. We have felt the pandemic effects as many other companies have, but we have also risen to the challenges it has presented. The pandemic has in many ways forced us to look at things differently and opened up new ways of thinking and for customers new ways of interacting. We led many online events with customers and adapted to suit the new situation. We got back to the personalized contact of letter writing and building relationships around the new normal while continuously updating our value chain by giving webinars on trending topics.

**I found a 2014 article in our database with you commenting on the Sappi Foosball Cup 2014. You said: "We love the atmosphere, fair competition, interaction and dialogue with our customers." Is this tournament still existing? And are you a football fan? As a Dutch citizen you probably favour the Elftal?**

The Sappi Cup has unfortunately been cancelled in 2020 and will also not take place in 2021 due to the Covid-19 restrictions we have to respect. This means that we will need to consider how to start up the competition or transition it into a new customer concept in 2022. I am an avid Feyenoord supporter, so everything that is slightly related to football is having my interest. The Orange national team has had some rough years, but is back and will hopefully show the world what they are capable of during the European Championship this summer! |||

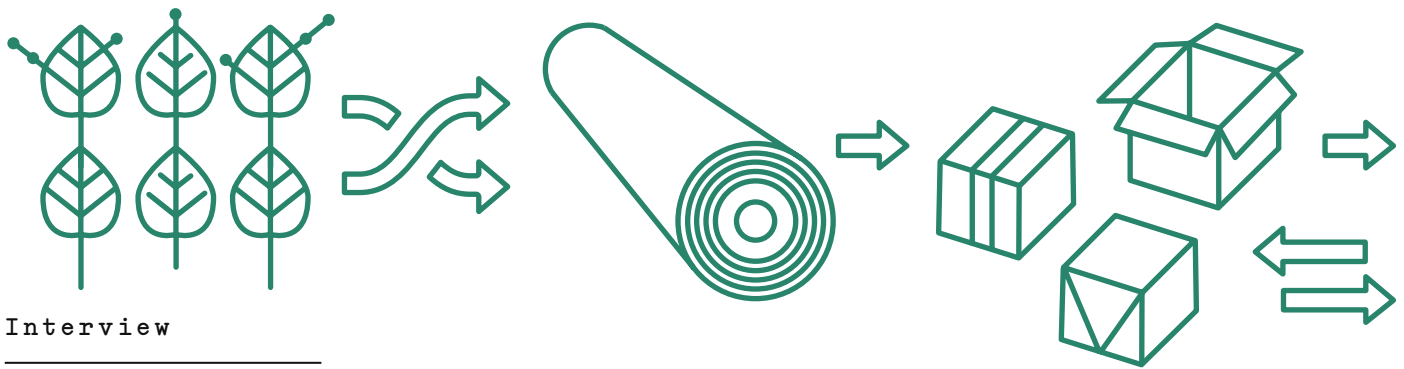
As an incoming CEO it feels reassuring to know not only the business already so well but also have worked for so many of those years together with Berry Wiersum. Berry has led Sappi through many challenges and as company we face many more ahead of us. The transition into the role of CEO is of course a journey and one I am very excited to take, but at the same time humbled as well by the task at hand.

**What is it all about the Thrive25 business strategy?**

Thrive 25 is an evolution of our previous 2020vision with a focus on the and success for the next 5 years. We will be looking at strengthening the balance sheet to give us a robust base for further investments in growing our higher margin segments. We will also most importantly be further embedding sustainability and innovation across the overall business strategy. This is something we are passionate about and have an obligation as a company to do so, as we rely on renewable resources to reduce any adverse impact and help build towards a more sustainable world.

**We live in critical times, to say the least. What will be the biggest challenges for Sappi Europe in the next decade(s)?**

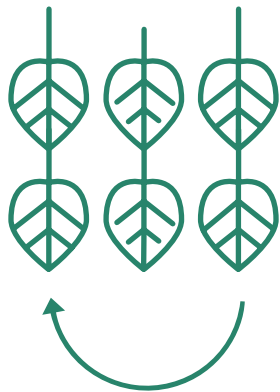
Without a doubt the biggest challenge facing business in the next decades is the environmental impact of climate change. As mentioned previously, we are a company that relies on re-



Interview

# Perfecting circularity together

As a cross-industry alliance, 4evergreen fosters synergies among companies promoting low-carbon and circular fibre-based packaging. P3 talked to Jori Ringman, Cepi General Director, and Hans Wortman, 4evergreen Acting Chair, about concept and goals of the alliance as well as possible difficulties.



**F**irst things first: Alliances around the topics of sustainability and circular economy are currently en vogue and are, so to speak, "easy to sell". What exactly is 4evergreen needed for and what are the goals of the alliance?

**Hans Wortman** 4evergreen is a cross-industry alliance aiming to perfect the circularity of fibre-based packaging to contribute to a climate-neutral and sustainable society. Together with our members, we aim at raising its overall recycling rate to 90% by 2030.

Minimizing the environmental impact of this natural and renewable material by keeping it in the recycling loop is vital to reducing the impact of the industry. We are paying particular attention to packaging with a lower circularity performance today – namely the types used for household, out-of-home and on-the-go consumption.

However, there are large divergences in recycling standards across Europe, which contributes to lower recycling rates. As we began to think about how we could improve the circularity of packaging, it became clear the best way to drive innovation and find practical solutions was together. Hence why 4evergreen was created. There was a substantial need to bring all industry stakeholders from across the value chain to the table. Furthermore, the challenge of 4evergreen is to help its members think beyond their own

segment – and consider the full value chain of the packaging material.

**Jori Ringman** 4evergreen is unique in that it gathers the whole industry chain across Europe and beyond. Cepi has always had a tradition of working in an innovative and proactive way. However, when looking to achieve systemic change, it quickly became essential to create an alliance enabling cooperation with a comprehensive outlook on fibre-based packaging's entire life cycle. Alone, it is impossible to achieve systemic change in circular economy. Moreover, even if we are already champions in circularity, having various perspectives from all partners in the alliance helps us identify and recognize blind spots we need to work on.

**How does the cooperation between the members work?**

**Hans Wortman** From an organizational point of view, 4evergreen is driven by the insights and initiatives of its members via four technical workstreams. Each focus on different aspects of fibre-based packaging, which a specific objective to reach. Members have the right to participate in all workstreams – they collaborate within their field of expertise to ensure the entire value chain is represented in each output delivered by the organisation. This is what brings 4evergreen at the forefront of innovation: all members, from pulp, paper and board manufacturers & recyclers, chemical suppliers, packaging producers and suppliers, Fast Moving Consumer Goods companies, food service providers & retailers, waste management companies & collectors to technology providers have discussions to align and deliver their collaborative guidelines. As a matter of fact, the work of the different 4evergreen workstreams feed into one another, making sure each set of guidelines is as comprehensive as it can be.

**Is there an exchange between the members that also encompasses patents and technolo-**





1 Jori Ringman, Cepi General Director.

2 Hans Wortman, 4evergreen Acting Chair.

### gies, i.e. that may come at the price of competitive advantages?

**Hans Wortman** Currently, 4evergreen has a dedicated workstream accelerating the development of technologies and new processes that will raise the circularity of fibre-based packaging. Its members have already initiated three projects focusing on the sorting and recycling challenges of paper and board with barrier functionality: "sortability of barrier packaging", "novel recycling technologies" and "comparative recyclability impacts". They aim to spur innovation across the fibre-based packaging value chain and leverage a range of novel technologies to raise fibre-based packaging's overall recycling rate.

All in all, the workstream is a great space where members can assess comparative recyclability impacts, identify novel recycling technologies as well as test efficient new sorting technologies for barrier paper and board. We bring the members together to utilise their expertise, however, we make sure to comply with EU competition regulations at all times.

### Where are the biggest hurdles in implementing the goals – in politics or in industry?

**Hans Wortman** 4evergreen is solution oriented. We believe a holistic approach is needed that focuses on improved design, innovative technologies and improved collection, sorting, and recycling systems – hence why the development of different set of guidelines. We would like to tackle the risk fostered by new packaging technologies, which might impose obstacles to recycling – across three critical stages of the packaging life cycle that are pre-sorting and collection, sorting and re-pulping.

On another note, we also wish the work of 4evergreen to be truly European. We would like to raise awareness about the outputs the alliance will be delivering in the second half of 2021 – indeed, our guidelines will be of great help to national industry associations and avoid duplication of work.

Our members are global, and the alliance enables the gathering of best practices in the field. We aim at making stakeholders no longer think within their silo, but about the full circle. While this perspective is new and source of compelling debates, we are gradually moving towards the same direction – truly recyclable products.

**Jori Ringman** The packaging market is going through substantial disruption. The pandemic, policy enactments, changes implemented by other packaging value chains, evolving economic models, innovative new materials and articles, and new ways of retailing and consuming are powerful drivers of change. Maneuvering among and leveraging these elements is the real challenge 4evergreen is tackling. Cepi and our members have been committed to working on circularity for over twenty years; 4evergreen and its key actors are now accelerating the implementation of this commitment in the industry.

### Can 4evergreen act independently of Cepi or is it some sort of subdivision?

**Jori Ringman** A few words on the alliance's inception: back in 2019, Cepi arranged five workshops on the Single-Use Plastics Directive's impact for the fibre-based value chain. At the end, participants – a mixed group of industry stakeholders – agreed there was more work ahead, which resulted in the creation and start of 4evergreen in January 2020. Only such a structure can have the systemic impact needed to perfect circularity. Cepi has the unique situation that our sector integrates both fresh fibre producers and recyclers. For us it is a daily task to see there is no clash between the beginning and end of the life cycle. This is the frame where also 4evergreen acts in Cepi – we seek every opportunity to optimise the circularity performance so that at least some parts of the value chain can improve their circularity whilst safeguarding that none are worse off.



**Hans Wortman** Although 4evergreen is an initiative by Ceperi, the alliance has enough independence to achieve the commonly agreed goals.

**How do you network – and how do you reach the relevant decision-makers at European level – in order to create the necessary framework conditions?**

**Hans Wortman** As an alliance, we strive to raise awareness in order for the industry to go forward. We support the European Union in the delivery of the Green Deal, the EU growth strategy for a circular and low-carbon future. Back in November 2020, we had the chance to welcome Virginijus Sinkevicius – EU Commissioner for Environment – at the public 4evergreen launch event. The way we help creating the regulatory conditions the sector needs is by providing guidance promoting reuse, recycling and reduce packaging waste. Ultimately, our biggest wish is for the industry to adopt our recyclability evaluation protocol and circularity by design guidelines to ensure all collected fibre-based packaging, specifically from household, out-of-home and on-the-go consumption, is recycled.

**Jori Ringman** We see two challenges here: the first one is to develop guidance on what would be the ideal system so that various ones across Europe can move towards that ideal system and harmonise. The second is to achieve clear labeling and marking for clearer information delivered to the consumer. Once we have a consensus on in the value chain, Ceperi has access to both high political and technical level decision making in Brussels and can bring these solutions to them. Likewise, Ceperi has a strong network of national associations which are ready to bring the same solutions to the national level decision makers.

**Isn't there a risk that the alliance could be perceived as a pure lobbying association or at least suffer from diverging interests of the individual members?**

**Hans Wortman** In reality, 4evergreen solely focuses

on delivering technical outputs which facilitate raising the overall recycling rate of fibre-based packaging – our members work hand in hand to achieve this common goal across all segments of the value chain. The alliance's Steering Group is the entity that provides strategic direction and oversight of its activities to ensure the coalition makes progress towards commonly defined targets and accomplishments.

**Jori Ringman** The alliance is not doing any lobbying at all. It is enough that the alliance members agree on the technical outputs and we trust they are then recognised as valuable and attractive solutions by policy makers as the whole society is moving towards a circular economy.

**What will the future of the alliance look like and which global players would you additionally like to have on board as a member?**

**Hans Wortman** 4evergreen would welcome any company linked to the fibre-based packaging industry committed to promoting low-carbon and circular solutions. There is a bright future for fibre-based packaging, and we need this future to be driven by a cooperative industry. This is what will enable us to move towards perfect circularity of the packaging.

**Jori Ringman** The joint work in the alliance is intensifying now as we have started the second year of the project. I am curious to see the discussions within the alliance towards the end of the year on what more should be achieved within this alliance. But such an extraordinary alliance where we move together to the future holding hands across the value chain can hardly be a permanent way of working. At some point we will have to conclude that we have shaped the systems and it is time to get working according to the system that emerged. Then the alliance can be concluded. What will remain, no doubt, is the understanding, willingness to cooperate and trust that has been developed during this project amongst the diverse actors across the entire value chain.

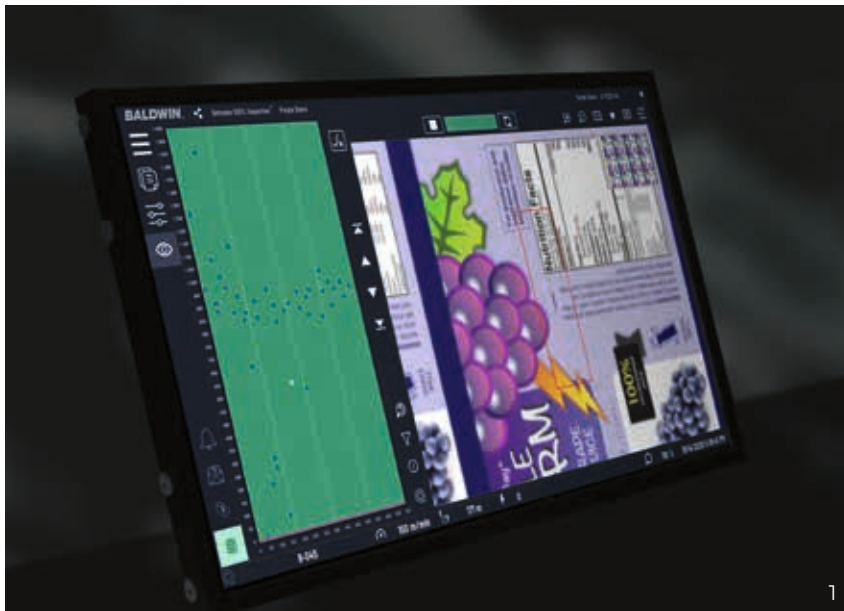
**Thank you very much for the interview! |||**

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Baldwin Vision

# Defender Print Inspection Workflow

**John Cusack, Business Development Manager for Inspection Systems at Baldwin Vision Systems looks at the current market demands for improving workflow through data-connected solutions, and how the latest Baldwin Defender solution aims to strengthen business' output and waste through defect tracking.**

**What would you say are the current challenges that print and packaging converters are facing?**

2020 with the outbreak of the Covid-19 pandemic was challenging for the industry and continues to affect businesses worldwide. However, the past 12 months have also highlighted strengths and weaknesses of production lines and processes, allowing converters to adapt and optimize solutions and workflows. Many printers are looking to streamline production by avoiding high turnover, operating more efficiently and ultimately, improving their bottom line.

**How can technology support these objectives?**

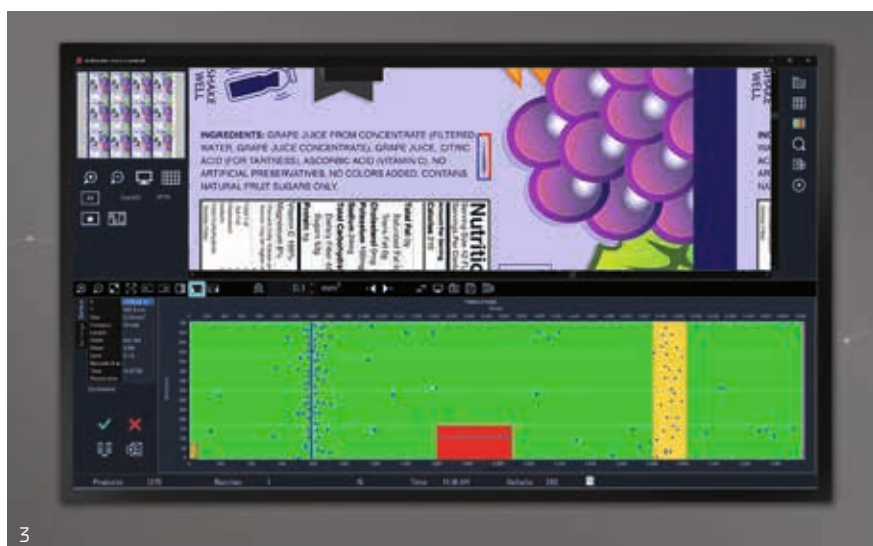
We have seen an increase in conversations around data-connected solutions such as Print

4.0. At their core, these concepts are not just about data capture, but the conversion of that data into information or business intelligence. As an example, you may have data that a roll has 500 splash defects, but the business intelligence component is turning that raw data into value by delivering a converting strategy where maximum yield can be achieved while meeting brand owner expectations. This conversion of data into intelligence can result in significant process improvements, enabling time and cost efficiencies within the production workflow.

When optimizing workflows, defect tracking solutions can stop substandard products getting into the hands of the customer, by identifying them early and reducing waste. This enables better print quality decisions with optimum inspection tolerances for each job, as well as customer satisfaction and retention.

**How responsive is the market in providing solutions to these conversations/challenges?**

There are several data-connected inspection systems on the market addressing different user needs. Early uses of inspection systems were lacking in visibility in terms of quality, ultimately leading to customer dissatisfaction and an increase in refunds. Converters need a way to eliminate the waste not just from individual processes like print, but across the converting workflow, as well as gain some insight into how their processes are performing – as using 100% inspection technology is simply not enough. For us at Baldwin Vision Systems, early identification of issues through 100% inspection is just the first step in a bigger solution to provide converters unparalleled access to data-driven intelligence that truly and positively impact the bottom line. With Baldwin Vision Systems' Defender suite, we wan-



- 1 Defender 100% Inspection monitors the entire web 100% of the time to detect and manage defects such as spots, streaks, color shifts, haze, wrinkles, pinholes, contamination, and any other random defects.
- 2 John Cusack, Business Development Manager for Inspection Systems at Baldwin Vision Systems.
- 3 Defender Data Central monitors, audits, stores and generates reports of both live and historical data to optimize quality control.

ted to address the issue head-on and provide a streamlined solution tailored to the demands of the industry.

**A few months ago, you launched your own defect tracking and inspection solution. How does this differ from others in the market?**

The new 'Defender' suite of data-connected technologies developed by Baldwin Vision Systems is our third-generation defect tracking suite built on 20 years of tracking knowhow to identify, track, and remove print defects. Designed specifically for wide web packaging substrates, the Defender 100% Inspection™ is the foundation for the industry's most comprehensive defect tracking solution. Defender Data Central® and Defender Waste Manager™ combine to function as a seamless defect detection and tracking solution.

Everyone in the print industry is experiencing tighter margins and managing customer expectations can be tough. Even though you have inspection software, mistakes still materialize, but using the full Defender suite of data-connected devices, including Defender 100% Inspection™, completely mitigates these risks.

Defender empowers printers to improve their processes and put more work through the press with valuable production data and detailed print quality reports. This also reduces the need for additional presses or press time, allowing you to do more. In addition, it delivers a very easy-to-use experience. With the tracking workflow, it's possible to eliminate all defects from outgoing products, providing perfect quality to brand owners. It is also possible to make tactical decisions about which defects need to be removed, based on your customers' specifications. This ensures maximum yield and maximum profitability—job after job.

**How easy is it for packaging converters to use Defender Technologies?**

The installation and operation are extremely easy. I often compare it to the intuitiveness of a smartphone; where you can unpack your product, navigate around it efficiently and have it up and running in no time. The user interface, in addition to the new camera, lighting and hardware architecture have been built around simplicity—installation, upgrades, use, and maintenance are all user friendly. Ensuring that this would be an easy solution to install and operate was at the forefront of Baldwin Vision Systems' plan when developing the products, as we wanted to ensure that the transition for customers would be as seamless as possible. If new staff are being trained, the process of undertaking this needs to be straightforward to get them up to speed as quickly as possible. With Defender, anyone can configure a job and have it functioning within 30 seconds – which is unusual for this type of technology.

**Looking at the choice of name for this product suite, why do customers need to 'defend' their business?**

The 100% defect detection and tracking protect both converters/printers and the brand owners/end customers. What would be the cost of losing a customer because the print quality didn't meet their standards? Or the cost of a liability claim against your business because of print defects? Defender protects users from these scenarios by detecting defects early in the process and having the tools to easily remove them, therefore greatly reducing the risk of returns, litigation, lost business, and a damaged reputation. |||



OQ Propyls

# Spreading the Good News about Propyls at Drupa 2021

OQ attended the first virtual edition of drupa 2021 in April where they took the opportunity to introduce the global company to attendees and host a webinar that was well received by the virtual audience.

Over the 4-day event, OQ explored the future of flexible packaging in conversation with professionals from the print and packaging industries while presenting their Propyls solutions for flexible packaging and polymer solutions for plastics converters. OQ also listened to what industry professionals had to say about their current challenges, and opportunities when it comes to solvents, ink, waste, efficacy, sustainability, and value for money.

In a special breakout session, joined by special guest speaker Professor Armin Weichmann from Hochschule der Medien (HdM) in Stuttgart, OQ's experts drilled down into three distinct areas where Propyls really add value: "less solvent", "less ink" and "less waste". During this session, attendees had the opportunity to ask questions and explored some of the technical characteristics of Propyls – and how they deliver higher quality, lower odour, higher printing speed, and optimal ink stability.

By switching to Propyls, the overall manufacturing process is more sustainable and environ-

mentally friendly. In addition, thanks to its slower evaporation behaviour, propyls reduce vapour concentration and VOC emissions into the atmosphere – and for converters, this is important.

Ink makers are a key customer for OQ and a major business segment, and Propyls allow ink manufacturers to offer more sophisticated ink lines to the market. By conducting trials with their customers, OQ shows how Propyls can have a positive impact on reducing overall resource consumption for both converters and ink makers such as ink (incl. pigments in the ink production), solvent, and waste ratio.

## Sustainable printing

Those characteristics also deliver an obvious ecological benefit: better use of resources, less waste, and less odour – representing a win-win for ink manufacturers, converters, and the environment. Based on conversations at drupa, it is clear that there is a major (and fast-growing) focus on sustainable printing – and given that for many applications the switch to water-based printing is not feasible, there is a call for a more sustainable solvent.

The great news is that with Propyls, converters can achieve up to 20% less solvent consumption and in some cases even more – which is a big step for converters. However, it isn't only the printing market that benefits from OQ's n-Propanol. With its biocide quality grade, OQ has been supporting the hand sanitizing businesses with a steady supply of n-Propanol BQ during the pandemic, supporting its long-term customers in this segment during a time when other solvents have been scarce.

## The flash point

During the pandemic, supply has been critical – another reason why 'less waste' is important: less





3

waste means a smarter use of resources and more product output. Those efficiencies are further boosted by the difference between the boiling and flash point of Propyls compared to traditional solvents, which leads to a reduced solvent consumption. This is due to slightly reduced reactivity – but it also has a positive impact on the security of the product as Propyl's molecules are less volatile compared to conventional solvents.

To support this point, OQ has key insights on why the evaporation rate of the products is so important to performance at the printing press – and can demonstrate the big gap between conventional and propyls solvents in terms of evaporation rate overall.

## Communicating the science

So, how exactly can switching a solvent lead to a reduction in waste? Together with invaluable input from guest scientist, Professor Armin Weichmann from Hochschule de Medien (HdM) in Stuttgart, OQ explained the science behind the story during their special breakout session at Drupa.

Propyls reduce the overall ratio of defects in a print job. So, when a printer wants to increase printing speed, it is recommended to use a medium-evaporating solvent – such as Propyls blends – this helps to reduce the chance of friction at the rolls at higher speeds. Ordinarily, the higher temperature that occurs during an increasing speed leads to evaporation of the conventional solvents, whilst being transported to the film. This causes anilox or cylinder cells to be filled with dry ink, which in turn causes defects in the print job.

One of the practical implications includes the benefits of greater ink stability, which is a key benefit when switching to Propyls. When using conventional solvents, the use of retarders is helpful in stopping the solvents from evaporating too quickly. However, it has a countereffect on ink



viscosity, leading to imbalanced ink during refills in the printing process.

This can easily be stopped by using Propyls as a diluting solvent blend, allowing ink viscosity to be maintained at the target value. This stability means that new technologies and techniques can be applied – like extended gamut, which requires stable dilution and viscosity management.

## Reusable ink

Another positive effect of propyls can be observed with ink inventory management. Inks that are diluted with retarders in the blend, typically have too high a viscosity when returning from the inventory to the press. By using Propyls, printers can waive the retarders, allowing the stored ink to maintain good viscosity – meaning that the ink can be reused. Furthermore, Propyls show positive impact on water spoilage and foam formation in the ink inventory as they attract less humidity from the environment.

This all amounts to a much higher level of productivity, improved standards, and better overall equipment efficiency – all while maintaining the same sophisticated standards with less resources. For the 100+ industry professionals that joined OQ at drupa21, these practical, operational efficiencies proved to be very good news.

## Even better news

The even better news is that in today's times everybody is keen to reduce their footprint and their resource consumption overall. This is where OQ Propyls step in with a solution for printers to reduce their consumption but maintain their quality standards without changing the overall technology or going for big investments.

By switching to Propyls, converters can maintain their technology standards, don't need to invest in big machinery but can still benefit from resource efficiencies – and of course, there are the welcome cost savings. With the market for flexible packaging growing, OQ has already invested in a new n-Propanol unit in the US in 2018: a move that enables the company to make good on its commitment to serving the growth ambitions of the flexible packaging printers around the globe and to serve their demand for a superior solvents concept. |||

- 1 By conducting trials with their customers, OQ shows how Propyls can have a positive impact on reducing overall resource consumption for both converters and ink makers such as ink (incl. pigments in the ink production), solvent, and waste ratio.
- 2 Using Propyls, the overall manufacturing process is more sustainable and environmentally friendly.
- 3 OQ's Propyls solutions are central to the development of superior specialty solvent solutions for flexible packaging.



- 1 Vivi Bellaish: One of the most talented designers in the country, and the person who was responsible for Shira Iscove's strapless dress, wrapping up the Kornit Fashion Week Tel Aviv. With the "Sign of the Times" collection, inspired by Prince.
- 2 On April 26th, Kornit released its new MAX technology, establishing a "new standard" for on-demand fashion and apparel production.

On-Demand

## Sustainable Fashion and Apparel Production

Kornit Digital, worldwide acting in digital textile printing technology, announced the release of its new MAX technology, establishing a new standard for on-demand fashion and apparel production.

**One technology, highest quality, endless design possibilities – all waste-free**

MAX technology surpasses industry norms for retail quality on multiple fabric types and breaks new grounds of versatility with previously unattainable print applications, significantly expanding the reach of digital on-demand textile production into the center of mainstream fashion and apparel.

A key feature of Kornit's MAX technology is XDi, which delivers revolutionary 3D capabilities for new, high-density graphic decoration that can simulate embroidery, vinyl, and heat transfer in a single, waste-free digital process. The new XDi, which is based on Kornit's patents, allows fulfillers and brands to expand their offerings to include new-to-market, innovative decorations without the inefficiencies and cost of operating analog technologies.

### Introducing Kornit Atlas MAX and ActiveLoad Automation

Kornit also debuted the ActiveLoad Automation technology, a new robotic system to significantly ease the burden of manual

and labor-intensive media handling in the textile decoration industry. This increases total output per shift while ensuring minimal downtime and exceptional reliability. The new patent pending ActiveLoad Automation technology ensures continuous production and consistency, while decreasing human error and fatigue, regardless of employee experience and training, for ultimate results and best operational efficiency.

The first product with MAX technology is now commercially available in the Kornit Atlas MAX, a carbon-neutral, industrial-scale DTG production system, providing unsurpassed retail quality, exceptional color-matching capabilities, and a wide, vivid color gamut, with exceptional durability. The Atlas MAX is delivered with the new XDi technology built in, for 3D printing capabilities. An upgrade to the Kornit Atlas systems will be available during the first quarter of 2022.

"Kornit's new MAX capabilities bring sustainable on-demand production to the mainstream. We plan to roll out the MAX technology to additional lucrative market

segments such as team sports, athleisure, diverse categories of fashion, and home décor applications," said Omer Kulka, Kornit Digital CMO. "Kornit innovation arrives at just the right moment to match supply to demand – demand that requires freedom of design for self-expression, quality, and sustainable practices; and supply that expands on-demand capabilities enabling the direct-to-consumer vision."

### Delivering on the promise of digital production

"There's a growing realization and acceptance that on-demand production is the answer to meet the demands of today's consumer," said Ronen Samuel, Kornit Digital CEO. "Kornit's MAX technology defines the future of on-demand, sustainable textile production, and the future is here now. MAX offers a rare sustainable symbiosis, more creativity, less waste. I am excited to experience what's possible once the collective brilliance of our industry begins to create digitally, without limits. A world of opportunity awaits us."

"Our customers have a strong, growing need for retail quality and additional applications, and we are confident the Kornit Atlas MAX will equip us to meet that demand," added Scott Valancy, COO, Monster Digital, which beta-tested the new system. |||

More details can be found on [www.kornit.com](http://www.kornit.com)



## Creation

# The Beauty of Paper and Art Coming Together

James Cropper packaging lead Tricia Hartmann describes how one of the papermaker's disruptive packaging designs became a work of art.

Following two years of research and design, our work with Pusterla 1880 was made a reality when we created the first eco-responsible packaging for champagne brand Maison Ruinart using our COLOURFORM™ innovation. Like a 'second skin' made of paper, the champagne case follows the lines of the Ruinart bottle's emblematic curves and allows the integrity of the Maison Ruinart flavour to be preserved until tasting. The raw and sophisticated texture was inspired by the walls of Crayères, the Maison's historic chalk-pit cellars in Reims.

The 'second skin' casing offered a packaging solution that was nine times lighter than the previous box and as such, enabled Maison Ruinart to reduce its carbon footprint by 60 percent, compared to the current generation of Ruinart boxes being used at the time. The ultra-light case is a mono-material design with genuine sustainability credentials, crafted from responsibly sourced natural wood fibres. Revolutionising the gift-box and cases market, the eco-designed packaging uses zero plastic and is 100 percent recyclable.

And the green credentials of the 'second skin' continue as Maison Ruinart invi-



- 1 Paper designer Anne-Charlotte Saliba demonstrates her artistic craftsmanship with the first eco-responsible packaging for champagne brand Maison Ruinart.
- 2 The packaging was made from James Cropper's Colourform innovation.

ted paper designer Anne-Charlotte Saliba to demonstrate with her artistic craftsmanship, as part of the Ruinart Studio upcycling art project. Inspired by the wide exploratory field offered by paper and how it plays with light, the French designer meticulously worked to sculpt the second skin case and sublimate it. First drawing scalloped shapes on the paper case, she then cut them out and finally assembled the pieces one by one by sewing. Her creativity and vision saw the case upcycled and transformed into a beautifully crafted night-light. Now known as the 'third skin', this piece of artistry has given our game-changing packaging creation a new lifetime use.

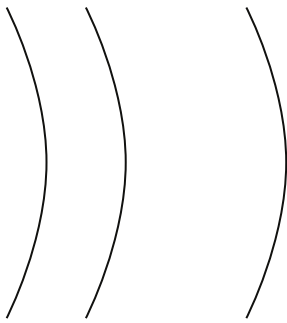
## To Tell Something New

Anne-Charlotte Saliba is an independent designer and craftswoman, taking her inspiration from nature to create light fixtures and bas-reliefs. After finishing her studies in applied arts, environmental design and interior architecture, she quickly special-

ised her work in paper. The paper material she uses comes from sustainable forests, testifying of an eco-design desire, that echoes the environmental challenges that drive Maison Ruinart on a daily basis, and ourselves here at James Cropper. Anne-Charlotte is an artist who likes to work on material that already has a story by appropriating it and by bringing it back to its essence to tell something new and to give it a fresh look and utility, so the partnership on Maison Ruinart second skin with Anne-Charlotte's artistic preferences was a perfect fit.

Maison Ruinart opened the Ruinart Studio to support emerging contemporary artists from all around the world. The programme commissions young talents, from a stylistic diversity, to bring an original and creative perspective on the Maison's universe, thus encouraging the constant renewal of artistic creation. The 'third skin' by Anne-Charlotte is the first iteration that blends together creativity and sustainability and we're delighted to be part of the story. ||| **Tricia Hartmann**





## Hygiene

# Addressing the Tension in Packaging

James Cropper packaging expert Stefan Pryor and antiviral champion Paul Morris, MBE, discuss the tension that now exists between creating beautiful packaging and ensuring it is hygienically safe.



The pandemic has changed many things; and some of those changes are here to stay. As we begin to see lockdown restrictions ease in some parts of the world, it's important that our industry takes the lessons from the past year and adapts its approach moving forward.

Everything from the way we shop and work, to how we travel has been reimagined. The global pandemic, which we're still fighting, has left us with an apprehensive consumer. As a result, what consumers deem important when it comes to making their buying decisions has transformed and as packaging experts we must sit up and take notice.

To explore this mindset, we conducted some attitudinal research with over 2,000 consumers, which confirmed our suspicions; hygiene is now top of mind for consumers when it comes to packaging, and while aesthetics for gift purchases

still remains important, a safe experience is what people are looking for.

More than half of the survey respondents said they are much more concerned about how clean and safe packaging is now when touching products in store, compared to pre Covid-19.

## Protected Paper

This begs the question, whether a new focus on hygiene could mark the end of unboxing experiences. Experts in our field need to address this tension between beauty and hygiene and react to it effectively. In our research we found that almost two-thirds of people agreed that if they knew a product was packaged in materials that fought microbes like Covid-19, Norovirus and MRSA, they would definitely choose to buy it over similar products. We are seeing big players address antiviral technology and recognise it as a way to gain a competitive edge.

What's interesting is that this solution has always been available at James Cropper. For many years, PaperGard bespoke papers, with antiviral and antibacterial properties, have been used in the medical industry. Only now is it attracting broader attention with recent tests having proven the papers to be effective at reducing the



presence of SARS-CoV-2, the virus that causes Covid-19, on the surface of paper.

The protected papers reduced the viability of the viral strain by over 95% in only 15 minutes, and by 99.9% within two hours. This could play a huge role in helping brands win consumer confidence in a post pandemic world.

Brands have a huge task on their hands to provide product assurance to consumers in a world where everything that is touched seems to pose a risk. This is where packaging comes in. It has the ability to prove itself as a key component in the story and help brands to affirm their commitments.

Using antiviral technology in packaging can reduce the risk of surface transmission of the Covid-19 virus, which could instantly offer reassurance to customers. It's a perfect solution to the tension between beauty and hygiene – beautiful packaging with in-built protection. But, in all of this, we mustn't forget the critical role which eco credentials play in responding to consumer demand. While we take on this new challenge, consumer interest in environmentally responsible innovations has not fallen by the wayside, in fact the focus on this is as strong as ever!

## The Changing Needs

We believe that brands will get to that point where all these components are considered and

delivered at an early stage in the packaging design. But, for now, as brands scramble to find the balance, there will need to be some compromise along the way.

Let's take bricks and mortar brands for example, who would typically offer an experience for consumers when they visit their store. They have had to pivot and look at how they convey that same experience online. Packaging can offer that, but if we're becoming increasingly conscious about what products and materials we bring into the home and the things we touch, is less more? And if it is, how can we think differently to create a truly great experience?

As the vaccine is continually rolled out it will be sure to bring some reassurance and confidence back to society but what we've experienced over the past year won't just go away overnight. We've all been bitten and as consumers we'll be twice shy.

This is an opportunity for brands to show they care, that they acknowledge the changing needs of today's consumer and they are willing to adapt and make changes. ||| **Stefan Pryor and Paul Morris, MBE**

*To hear more on this subject, visit [www.jamescropper.com/papertalks](http://www.jamescropper.com/papertalks).*

- 1 James Cropper's PaperGard innovation uses Addmaster's Biomaster silver-ion antimicrobial treatment, which is built into the paper during manufacturing and remains active for the life of the product.
- 2 Walpole's 2020 yearbook exquisitely demonstrates what sustainable, hygienic and luxury packaging could look like in the future.



- 1 In autumn 2020, Mondi addressed the demand for through-dyed papers in dark, intensive shades and expanded the Pergraphica range with, among other things, ten "Deep & Dark Colors".
- 2 High-tech is increasingly being combined with the megatrend of hightouch in our everyday lives; for example, in the high-quality packaging of our last online purchase.



## High-Tech & High-Touch

# From Cloud to Paper

The Covid-19 pandemic has led to a fusion of the analogue and digital world that is stronger than ever. Cross-media projects, such as 'Catching Feels', a cooperation between Mondi and Adobe Stock, demonstrate how synergies between digital tools and analogue quality help create sensory experiences that add up to more than the sum of their parts.

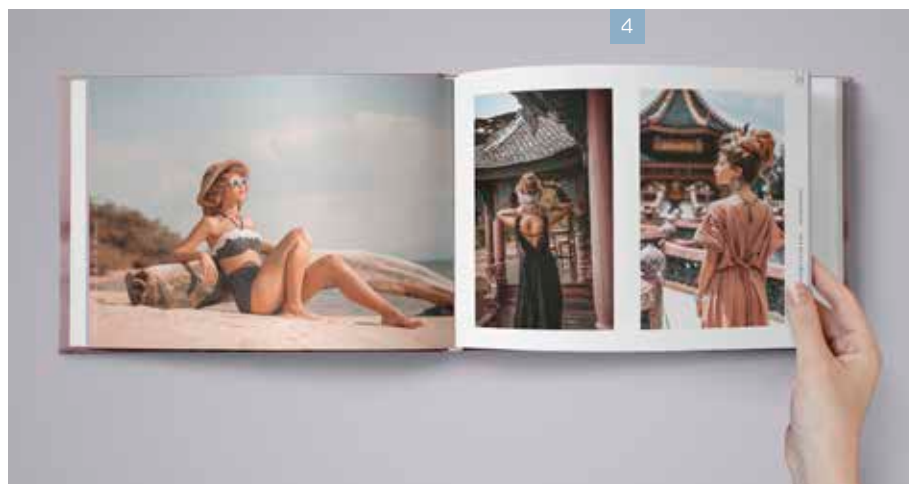
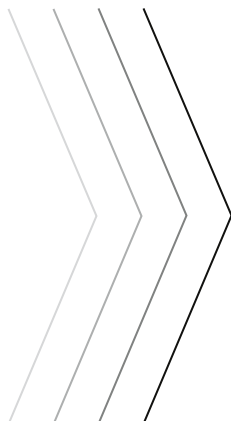
Relaxing with a photo book or unwrapping a carefully packaged online purchase is something many of us have been enjoying during the pandemic at the end of a long day in front of the computer at home. Contact restrictions and working from home have shifted work life and home life largely into the digital space. However, digital information services have been challenging print products for the top mass medium of choice well before the Covid-19 pandemic. Digital media deliver exactly the kind of information we need, or simply want, in everyday life at the touch of a button – fast and easy, anytime, anywhere. This makes anything that is tangible and real all the more precious during this time of digitally maximised efficiency, when physical contact and sensory experiences of any kind are rare. The more time people spend in the digital realm, the more they crave something real, a sense of slowing down, a sense of touch.

## High-touch – a megatrend and its impact on the paper industry

This sense of craving is perhaps best explained using the principle of high-tech/high-touch. Rapid technological progress (high-tech) stands in contrast to a need for sensory impressions, human interaction and a personal touch (high-touch). This conflict was outlined in 1982 by futurologist John Naisbitt in his best selling book 'Megatrends – Ten new directions transforming our lives', which is when digitisation as we know it today was just getting started. John Naisbitt is the one who first coined the phrase 'megatrend'. Unlike trends in fashion, products and industries, which are limited in terms of time as well as content, a megatrend is a profound change that is woven into the fabric of society and business over a period of years, or even decades.

Megatrends also have an impact on how we consume products and media. Like the smell of a





- 3 In "Catching Feels", themes, moods and paper characteristics come together to create a very unique sensory experience for the viewer.
- 4 The emotions and themes chosen in the lookbook depict moments of longing that are at the moment rarely experienced by the viewer due to the Covid 19 pandemic.

new book or a premium package with relief embossing, print products with their sensory aspect can provide the perfect high-touch antithesis in the jungle of high-tech communication channels. They address the primal human need for touch, which is anything but trivial against contact restrictions and hygiene regulations due to the pandemic. Touch gives people a sense of direction in an increasingly complex world, grounding them in the here and now like no other sensory impression. Furthermore, flipping through books and magazines, or unwrapping a package, takes place offline, in an oasis far from digital information overload. As a result, engaging with print products is becoming an increasingly emotional experience, a luxury people consciously take time out for.

### Premium design paper for creatives

Mondi Uncoated Fine Paper (UFP), a part of the international Mondi Group, has made luxury its mission. Its range of uncoated fine papers is aimed at designers, luxury packaging producers and finishers. This target audience knows all about the emotional impact of high-quality print products, thus setting high standards for the visual and haptic properties of paper.

At the heart of the Mondi range is Pergraphica®, a premium brand of design paper made in Austria, featuring excellent printability and very good tolerance for finishing processes. The theme 'Creatives Inspire Creatives' already gives a clue about the target audience for these uncoated fine papers. Mondi last addressed the need for coloured papers in dark, intensive shades in September 2020 and expanded the Pergraphica range with 31 new colours, ten of which are 'deep and dark colours'. The combination of deep colours and striking haptics is designed to trigger one thing above all: emotions.

### Bridging analogue and digital through art

With that in mind, the Pergraphica 'Catching Feels' campaign, also launched in September 2020 by Mondi and Adobe Stock, seems all the more appropriate. The campaign title is absolutely to be taken literally. The aim of this digital/analogue partnership was to capture emotions based on the high-touch principle and bring them to life for multiple senses. The challenge was to show sophisticated digital artwork to best advantage by transferring it to an analogue medium and making it tangible.

The result of this cross-media collaboration is a high-quality lookbook for print and design



The heart of Mondi's portfolio is the premium design paper brand Perigraphica® produced in Austria, which is characterised by particularly good printability and can be easily finished in post-printing processes.

## High-tech and high-touch in perfect harmony

To make such an ambitious project during these times of remote working happen requires seamless digital workflows and the appropriate collaborative tools delivered by Adobe Creative Cloud. The Adobe product range put the finishing touches on the images, enabling post-editing and processing for the best possible print result. "Adobe Photoshop, Indesign and After Effects – there's no Adobe application we didn't use", recalls Joey Gordon, Senior Designer at London-based creative agency True, which coordinated the project. Six videos, in which the artists offer insights into their creative process, also form part of the project. "We used Premiere Pro for post-editing the videos to help us create a uniform colour image." The organisation and implementation of the 'Catching Feels' project demonstrates, how the intelligent application of high-tech can help create authentic high-touch experiences.

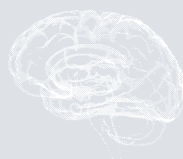
The mymondi.net portal completes and digitally enhances the multi-channel campaign. This high-tech enhancement of the high-touch experience 'Catching Feels' not only offers paper lovers detailed information about the Mondi product range, including the possibility to order swatches, as well as an interactive paper and dealer search function; it also provides inspirational user stories and podcasts all around print and paper.

creatives, in which a select group of artists from the Adobe Stock Premium Collection depict six moods or emotions. Serenity, Passion, Curiosity, Individuality, Honesty and Freedom were captured on Perigraphica papers using complex patterns. The selection of emotions reflects the Zeitgeist, as the images mirror the kinds of cravings we are unable to satisfy during the pandemic. And so the breathtaking landscape and nature photography by Charley Savely depicting 'Serenity' takes the observer to places that cannot easily be accessed with current travel restrictions in place, and the photographs from the 'Individuality' chapter capture the authenticity of human interaction.

The creators pulled out all the stops in terms of the printing process in order to let the observer experience varied impressions with all their senses. The depicted moods are brought to life with two surfaces, six paper substances, ten shades and 16 paper qualities. In addition to two digital printing processes, traditional offset as well as LE-UV offset printing were deployed to produce the lookbook. Mondi created colour profiles specifically for this printing project, ensuring that the images reach their full potential on the paper. One of the unique features of 'Catching Feels' is the way in which different images, moods and paper qualities come together to create a single, harmonious sensory experience.

## From either/or to a complete work of art

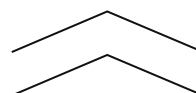
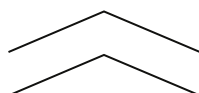
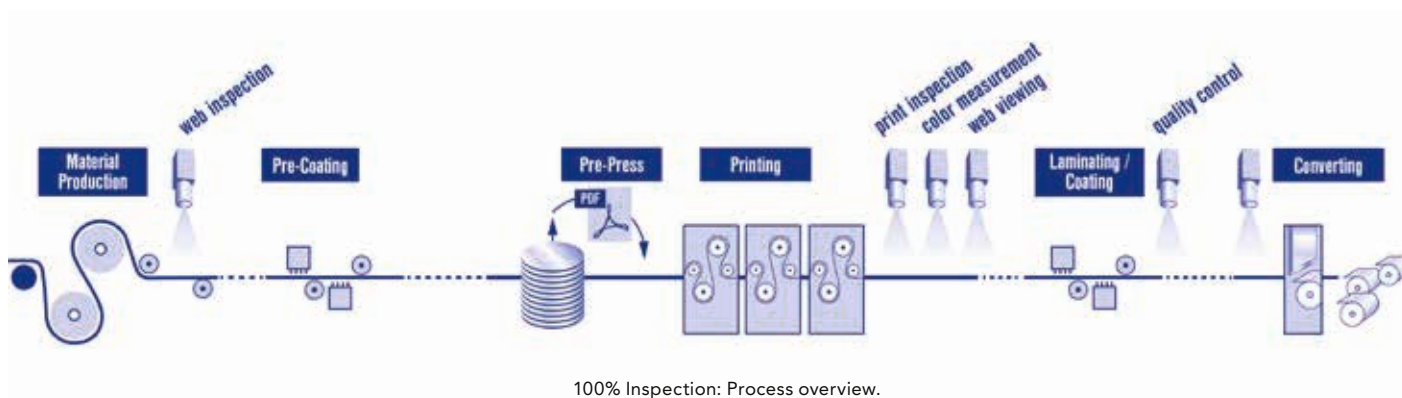
The 'Catching Feels' campaign is a good example for how the much-hyped conflict between digital and print can be transformed into synergies. The digital world provides the right tools and the creative basis for a high-quality presentation mechanism of analogue products, as well as the enrichment of background information and insights. This creates a complete work of art that is more than the sum of its parts. Using these synergies bridges the gap between high-tech and high-touch. |||



What Does it Mean?

# 100% Inline Inspection

When describing professional printing processes (not only) in packaging printing, there is no getting around the 100 % inspection. Lucia Dauer, Product Manager Print Inspection, ISRA VISION, explains the term.



High-quality packaging means that printing companies must deliver goods that are absolutely free of defects. This applies to flexible packaging as well as to printed corrugated cardboard or metal packaging. The monitoring of the printing process and the fastest possible reaction to printing errors are crucial. For this purpose, inline inspection systems, e.g. from ISRA VISION, are used for one hundred percent quality control and an efficient workflow.

The inspection systems with high-quality camera and lighting technology are installed on the printing machines. They start checking as soon as the printing process is initiated - by comparing the print template. They also support color control during the make-ready process so that print production can start as quickly

as possible with the right settings. During the printing process, they identify defects that occur once or repeatedly, such as streaks, spatter, register errors or the like, in real time and, through appropriate alarm signals, ensure that the operator can immediately take appropriate corrective measures. This prevents waste or costly reprints. Web monitoring systems give the operator an image section as a static image in order to enable additional visual control at full production speed.

Systems attached to conversion machines monitor the quality in the further processing process, e.g. lamination or roll assembly with cutting and reeling processes. ||| **Lucia Dauer,**  
**Product Manager Print Inspection, ISRA Vision**



# 30th PTS Coating Symposium 2021

## Functional coatings for fibre based packaging



**Venue:**  
Online  
Conference



**Date:**  
07th – 08th  
September 2021



**Information & Registration:**  
[www.coating-symposium.com](http://www.coating-symposium.com)



**Register now!**

In 2021 PTS will celebrate the 30th anniversary Edition of the PTS Coating Symposium and the 70th anniversary of the PTS. Since 1963 we have been organizing this conference for representatives from paper and board surface upgrading industry, which is now one of the important and largest meeting point on international level.

The two-day symposium will focus “functional coating for fibre based packaging”. You can look forward to presentations by recognised speakers from science, business and administration. Explore the program, register to the event and get innovative exchange and discuss trends. Use the event to expand and deepen your network.

### Start of Day 1:

#### Application techniques

##### “Eco-friendly paper cup using chromatogeny”

Dr. Mohammed Krouit - Centre Technique du Papier (CTP)

##### “Direct application for high strength and barrier properties, on-line, for wood-containing low basis weight papers”

Tom Larsson - UMV Coating Systems AB

##### “Board Precoating: Coating Structure Effects on Topcoat Performance, Binder Hold Out & Barrier Functionality”

Dr. Janet Preston - Imerys

##### “Hard nip sizing with spray and curtain application improve the strength properties of liner and coated board grades”

Henri Vaittinen | Antti Räisänen - Valmet Technologies Oy

##### “Coating and laminating processes for paper packaging materials under the aspect of sustainability and recycling”

Andrea Glawe - KROENERT GmbH & Co KG

#### New Barrier Feedstocks

##### “Bio-based Barrier Coatings on Paper with Polyhydroxy-alkanoates: a View on Opportunities and Challenges”

Pieter Samyn - SIRRIIS Smart Coatings Lab

##### “Bio-Based Barriers for Packaging Materials – Impacts of Surface Treatment and Biopolymers on Barrier Properties of Packaging Paper”

Dr. Samir Kopacic - TU Graz

##### “Technological and commercial advantages exchanging dextrin with native starch as cobinder in coating colours”

Tilman Bauer - Bauer Verfahrenstechnik GmbH

### Start of Day 2:

#### Analytics and Process

##### “Rheology management in water based barrier coatings”

Vesa Kukkamo - ACA Systems Oy

##### “Oxygen and moisture barrier for packaging application: The impact of different precoating conditions”

Dr. Beko Mesic - Karlstad University

##### “Efficient heating elements for sealing and drying applications”

Marcus Stein - Watttron GmbH

#### All Cellulose Products

##### “Microfibrillated Cellulose – Applications for Sustainable Barrier Papers and Boards”

Tom Larson - FiberLean Technologies Ltd.

##### “Nanocrystalline Cellulose in Coatings and their Effects on Barrier Properties”

Janja Juhant Grkman - Pulp and Paper Institute, Slovenia

#### Closing the loop

##### “When natural is required – achieving sustainability goals and winning the regulatory challenge”

Phil Greenall - EcoSynthetix

##### “Greater sustainability with Waste Coating Colour Recycling”

Christian Makari - GAW technologies GmbH

##### “Dispersion barrier coated fiber based materials and holistic study about repulping”

Mari Ojanen - KEMIRA Oyj

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» Panel Discussions

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Ferag Tapefix



Newspapers and magazines are sealed on the open side – the cut-edge.



## A Sound Alternative to Foil Wrapping

**Foil is increasingly attracting criticism in public debate. With a further development of its Tapefix technology, Ferag AG now wants to offer an environmentally friendly alternative for sealing print products.**

Climate neutrality and the conservation of fossil resources are increasingly taking centre stage in political debate and the resulting legal requirements. With this in mind, major companies in the branch – such as postal companies, magazine publishers and distributors of direct advertising – are on the lookout for suitable alternatives.

Over the past few months, Ferag AG – provider of finishing technology for high-circulation print production – has been casting a critical eye on foil wrapping, which has been used for packaging print products for decades. This has led to a further development of Ferag's Tapefix technology, which offers a reliable alternative to the foil wrapping of newspapers, magazines and booklets.

Foil wrapping is not only used for freesheets and newspapers, but also for packaging individual, high-quality periodicals. Additionally, preferred periodicals are wrapped in foil both at home and abroad, and bundled advertising supplements delivered to customers directly in plastic bags. In Germany, one of the most well-known examples of this is the "Einkauf aktuell" periodical delivered by Deutsche Post. The approximate cost of the foil used

is around €6.50 per 1,000 copies, depending on the amount of advertising material to be wrapped.

### Detachable adhesive strips

Tapefix from Ferag has proven a popular solution for several years now. Every week, millions of advertising supplements that have been collected via machine are then fastened and bundled with detachable adhesive strips using this technology.

Tapefix is currently undergoing further development at Ferag, with the goal of also offering the possibility of sealing on the open side – the cut-edge. This step is then made online at production speeds of up to 30,000 copies per hour. In the process, two custom-fit adhesive strips are fed in via a mobile device. The positioning of the strips can be adjusted according to the product. The product, which is suspended in the Ferag universal conveyor, is then sealed on the open side. Additional operating personnel are not necessary for the gluing module.

The product size can vary between 420 x 300 cm (approx. DIN A3) and 210 x 148 cm (DIN A5). Collections with a thickness of between 2mm and 12mm can be pro-

cessed. The 19-mm-wide Tapefix adhesive tape is wound on reels measuring 8000 metres in length. A pallet with 48 reels (minimum quantity) is priced at €14,160. Assuming a tape length per copy of 2 x 40 mm, this results in material costs of €2.95 per 1000 copies – less than half the costs seen when using foil.

### Smaller environmental footprint

The added value in economical terms not only comes from cutting material costs in half, but also in the need for fewer personnel during production and the significant increase in production speed. This is in addition to the smaller environmental footprint.

Tapefix technology uses a specially developed material made of natural fibre that can be removed without leaving residues. It is thus fully recyclable and can be composted or disposed of as waste paper. Ferag is also pushing for "Cradle to Cradle" certification for the Tapefix material.

On a socio-political level, foil wrapping is clearly not seen as an acceptable solution in many countries. As a result, the reputation of the packaging company suffers. The new technology not only avoids this, but also achieves a significant increase in quality.

Ferag is currently in discussions with numerous postal service providers, with their requirements all included in the development process. The start of the concept phase is planned for the second quarter of 2021 and Ferag is eagerly awaiting the feedback from potential users. The product should then be ready for the market at the end of 2021. |||



Leonhard Kurz

# Advantages in Competitive Markets

**In view of the countless advertising messages that hit consumers every day nowadays, the fight for attention for manufacturer and product brands is getting tougher. Only those who manage to get noticed are successful.**

In addition to the product properties, the packaging plays an important role in getting into the buyer's field of vision and creating a certain attraction from the very first moment. This is exactly where the finishing specialist Leonhard Kurz supports its customers. The company bundles its expertise in packaging finishing under the slogan "The Nature of Attraction".

The conditions for manufacturers and processors have tightened significantly over the past decades: They are faced with the almost impossible task of standing out in a saturated competitive environment, of constantly reinventing themselves as a brand and still remaining true to their own identity. In addition, consumers expect unusual designs, fast response times to new trends and inexpensive offers. The whole thing should not have the appearance of mass production and ideally, with a variety of variants, perfectly address the various demands of buyers – above all the desire for sustainability. This phalanx of challenges meets additional regulatory requirements. Together they create the framework

within which the manufacturers must act.

The system provider Kurz has recognized that product and brand strategists in the graphics industry are faced with major tasks when it comes to packaging, and they want to tackle these with new, cross-technology solutions. Aspects such as individualization, trends and digitization with simultaneously growing awareness of sustainability form the basis of the holistic approach „The Nature of Attraction“, which the company from Fürth presented for the first time at drupa 2021.

## Offering new solutions and perspectives

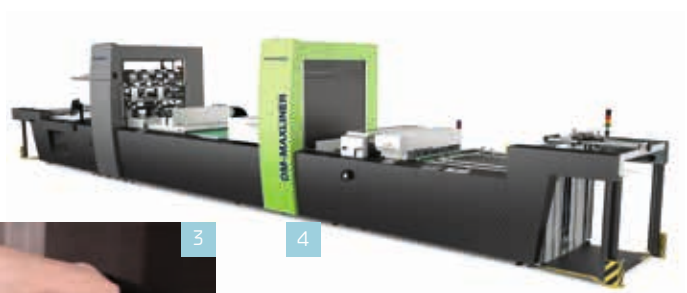
The motto of the hour for manufacturer and product brands is: "It should be even more flexible, far faster and, ideally, sustainable." The suppliers are also feeling this pressure. In order to remain competitive, it is no longer enough to turn the time and cost screws. Effective systems and products for state-of-the-art packaging solutions secure the future in the printing and



packaging industry with their important role in the circular economy. After all, it is packaging with functional and aesthetic surfaces that protect goods, support logistics and trading processes, generate demand, increase the value of branded products and, through their unique design, offer a decisive incentive to buy.

With new perspectives and specific solutions, Kurz wants to ensure that the packaging industry can keep up with the high number of trends and customer requests. Accordingly, the experts at the globally active family company are constantly working on new systems for digital printing and digital finishing, developing hot stamping processes and also bringing innovations to the market for cold transfer. With "The Nature of Attraction" it should be possible to bring together the individual needs of brand manufacturers and suppliers with the range of services of printing companies and finishers. The finishing expert is thus demonstrating his further development from a specialized consumables supplier to one of the leading system providers in the field of thin-film technology with its own innovative machine systems: "Our approach is grounded in our brand identity," explains Stéphane Royère, Head of International Product Management, and emphasizes: "It is in the nature of the Kurz brand to create an attraction for all products – as efficiently and sustainably as possible." As a system provider, manufacturers and pro-





processors are shown the great potential that lies behind the attractiveness of refined surfaces.

### In the fast lane with digital finishing

The Kurz subsidiary STEINEMANN DPE has developed its own range of products for professional processors in the field of digital printing and digital finishing who are under enormous time and cost pressure. With the DM-MAXLINER, the company promises production processes that produce results quickly and easily and thus represent a differentiating factor from the competition.

The digital printing and finishing system creates spot varnishing, relief varnishing with a haptic effect and metallization in a single operation. The DM-MAXLINER delivers high-quality finishing products in a correspondingly shorter time. The digital all-in-one solution for sheet finishing (up to B1 +) on an industrial scale sets new benchmarks in terms of flexibility, quality and efficiency of digital postpress. The machine can be set up in a few minutes with minimal manual effort and runs in the register from the 2nd sheet at the latest. With outputs of up to 10,000 sheets per hour with a pure inkjet UV coating application and up to 5,100 sheets per hour with DIGITAL METAL® application, the DM-MAXLINER increases the finishing perfor-

mance of professional printers in all areas of application: from packaging and Commercial printing through to web-to-print and letterpress.

Kurz promises minimal set-up times, high media flexibility and fast order throughput, which in turn has a positive effect on production costs. In addition, there are completely new design options that bring advantages especially with regard to the so-called "mass customization" of the manufacturer.

### Shape difficult surfaces effortlessly and quickly

It is not just the digital design options that are constantly being further developed due to the new requirements. Established printing companies in the hot stamping area should also be able to keep pace with the increasing demands of their customers through innovations in the future. The way here leads through product developments and efficient technologies that defuse the cost drivers within the hot stamping process.

So far, the quality of hot stamping has been dependent on the substrate. Refiners must therefore have a large selection of hot stamping decorations in stock in order to be equipped for the largest possible range of surfaces and to be able to serve the corresponding jobs as quickly as possible. High storage costs and an elaborate ma-

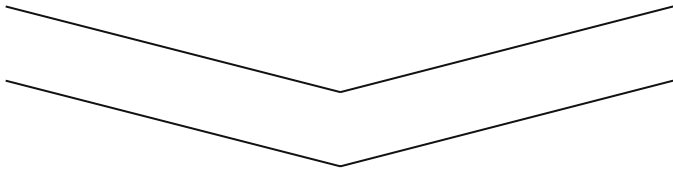
chine setup due to the change of the hot stamping decoration are inevitable. Time and costs can hardly be saved in this way and lead to lower efficiency.

- 1/2 Sustainable advantage: The new Kurz cold transfer standard KPS SX + offers high gloss and can even handle sophisticated designs and grid gradients. KPS SX + not only promises reliable production stability while using less material and costs at the same time. It also has a positive effect on the sustainability balance of refined products.
- 3 Get noticed at all costs: With consumer goods markets almost globally saturated, exceptional packaging designs are a key success factor – especially when they meet the increasing demands on efficiency and sustainability.
- 4 Digital fast lane: The DM-MAXLINER from Kurz subsidiary STEINEMANN DPE sets benchmarks as a digital all-in-one solution for sheet finishing (up to B1 +). The system creates spot varnishing, relief varnishing with a haptic effect and metallization in a single operation.

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Kurz recognized precisely this problem and set out to solve it sustainably. Thanks to new, high-coverage transfer products for hot stamping finishing, processors should be able to make their daily work easier. Finishing with LUXOR®/ALUFIN® MSU (Multiple Surface Usage) is possible without any problems on all conceivable surfaces, even in high-speed printing, and creates a lot of freedom for the processing company. Because: According to the short promise, you no longer have to struggle with air pockets or orange-peel-like distortions after the embossing.

Behind the product name LUXOR®/ALUFIN® MSU there is a universal hot stamping solution that enables decorations to be made from the most sophisticated materials that have so far refused to be surface finished. The processor thus receives a broader range of applications, on the one hand saves time and money with the LUXOR®/ALUFIN® MSU and on the other hand can rely on the reliable properties. Whether on coated or printed paper, on a wide



1 Easier everyday life: With LUXOR®/ALUFIN® MSU, the sharp-edged refinement with high gloss on a wide variety of surfaces such as coated or printed papers, on a wide variety of laminates or UV-coated substrates, even in high-speed printing, is easy, efficient and high-quality.

2/3 The DM-MAXLINER can be used to create glossy and haptic effects that make packaging stand out from the crowd.



variety of laminates or UV-lacquered surfaces: even with flat motifs, air inclusions are no longer an issue. But even with the finest motifs and high printing speed, LUXOR®/ALUFIN® MSU delivers sharp-edged decors with high gloss thanks to their soft detachment. As with the transfer products of the same name, the hot stamping solution can be used to create high-gloss or matt surfaces as well as tactile effects – whether with relief, micro- or nano-embossing. Kurz offers the product worldwide – in many standard colors. Individual color solutions are also possible.

### Breaking new ground – also with cold transfer

Even processors who rely on highly efficient cold transfer finishing are now feeling the pressure that weighs on the entire industry: speed, optics, cost efficiency and sustainability are also playing an increasingly important role here. Cold transfer is highly efficient when it comes to finishing packaging, advertising print jobs, magazines and wet-glue labels in sheetfed offset, because printing and finishing can be

carried out in one pass. In addition, almost all metallic effects can be created due to the overprintability. Depending on the transfer product, matt gloss effects can be implemented just as easily and quickly as high gloss effects. Despite excellent gloss, high performance and the best price-performance ratio, the efficiency limit of the processor has largely been reached.

The reason: With cold transfer, the processing of the transfer product has to do one thing above all: work smoothly. No parameter may jeopardize production stability and thus job processing under time pressure. The refinement must be up to the speed. Their transfer must be ensured just as easily as optimal adhesion, flexible overprinting and pronounced edge definition – regardless of the nature of the design (e.g. fine elements or large areas), the adhesive, the colors or the substrate.

In order to reliably achieve this production stability while using less material and time, Kurz has developed a new cold transfer formulation with a wide range. With the new KPS SX + cold transfer product, the company is offering a solution for the first time that, thanks to its extended proces-

sing window, makes the use of several products for different cold transfer finishes superfluous and is also easy to set up and process.

The new formulation is suitable even for sophisticated designs and grid gradients. The range of areas of application is wide: KPS SX + is suitable for conventional and UV systems with regard to adhesives and inks, for different substrates, food packaging and film-saving modules as well as for flat and filigree motifs.

If it is processed with the appropriate KPS consumables (printing blanket and adhesive), the KPS SX + can even do jobs where laminates need to be replaced. “Our customers have had the best experiences with these complete packages,” reports Norbert Hell, Global Business Development Manager Cold Transfer at Kurz. This aspect in combination with the eco-efficient balance of the cold transfer process will move the new KPS SX + – also in view of the increasing demands on the sustainability of print products – into the focus of processors, according to the Kurz expert. Because: With its properties, it has a positive effect on the sustainability balan-



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ce of the product to be refined, which in turn represents a decisive competitive argument for processors.

The cold transfer formulation not only fulfills essential legal requirements such as those of the electronics industry (RoHS) or those of the packaging industry (CONEG). Articles finished with KPS SX + can also be recycled after use. Because when processing the finishing – as with every transfer product from Kurz – no PET film remains on the finished end product. In addition, KPS SX + (as KPS RECO +) is suitable for the KURZ RECO SYS® recycling program.

## Sustainability as a key to success for refiners

When it comes to finishing packaging, manufacturers and processors do not just strive for cost efficiency. In terms of environmental friendliness and sustainability, new standards must always be set. The environmental compatibility along the

entire supply chain and thus also in terms of packaging must be presented transparently and credibly. Kurz has set precisely this standard with RECO SYS® and offers market participants clear added value: The take-back and recycling system is in tune with the times in the graphics industry and creates this transparency advantage for processors. Participating finishers can advise customers on how attractive print products with consistent, certified sustainability can be realized.

This transparency advantage not only has a positive effect on the brand image of the manufacturer. It also clears up a prejudice: for decades, the term embossing foil had established itself as a term for metalized decorations among processors and manufacturers. When finishing with short thin film technology, no film is transferred to the substrate. The wafer-thin PET sheet, which was previously thermally recovered and is now being taken back and recycled by Kurz, only serves as a carrier for the

transfer of the wafer-thin packages of lacquer. The aluminum layer applied to the substrate is only 0.02 µm thick, and the amount of lacquer is also very low (~2.4 g/m²).

Specifically, this means: With the finishing technology, processors and manufacturers are able to efficiently and sustainably transform products into eye-catchers at the POS. This performance is achieved through an application of material that is 6,000 times thinner than a human hair and whose means of transport, a PET carrier, can be taken back as valuable material, recycled and returned to the cycle as a new raw material RECO POUND® in the future.

What sounds simple is only possible with a strong system provider on the side of the manufacturers and finishers. The company Kurz from Fürth has been facing these challenges for years together with its customers and partners and has been helping to provide the finishing industry – regardless of whether digital, hot or cold – with new and more resource-efficient process solutions. LUMAFIN®, the semi-transparent, aluminum-free decoration with a depth effect, or LIGHT LINE® with hologram effects are just two examples. |||





PTS Conference

## Paper & Board For Food Contact

The established PTS conference “Paper & Board for Food Contact” took place on March 2nd and 3rd, 2021 - this time with two innovations. On the one hand the conference language was English and on the other hand the event was organized as an online session. These changes offered the participants an innovative program, diverse topics and contributions from international experts.

The field of participants was international: Dr. Harling and Dr. Kleebauer welcomed 70 participants and speakers from 15 countries (D, F, ES, DK, Israel, USA, India, CZ, AT, CH, Pakistan, BE, FL, NL, SWE).

With the support of Streamplate, the PTS seminar room in Heidenau became a live studio for two days, from which the moderation and lectures were broadcast. In addition, the speakers were connected online to give their presentations and take part in the panel discussion with images and sound – from Denmark to Pakistan.

The recognized international speakers from science, authorities and business provided updates and impulses with the usual good discussion potential.

### Current FCM Legislative Developments in Europe and Germany – An Update

*Katharina Adler, Federal Ministry of Food and Agriculture (BMEL)*

Ms. Adler introduced the legal basis in Food Contact Materials (FCM) law and provided information on the current status of the evaluation and revision of the EU FCM regulations.

The Commission will review food contact materials legislation to improve food safety and public health (in particular by reducing the use of hazardous chemicals), promoting the use of innovative and sustainable types of packaging using environmentally friendly, reusable and recyclable

materials and contributing to a reduction of food waste. In addition, as part of the initiative for sustainable products announced in the Action Plan for the Circular Economy, it will prepare a legislative initiative on reuse in the field of catering services to replace single-use food packaging, single-use cutlery and cutlery with reusable products (“Farm to Fork” Strategy May 2020). The first proposal for the revision of the FCM rules is expected for the end of 2022.

The aim is to shift the focus to the end material and better address the properties of all end materials and products. The migration of all potentially migrating substances (NIAS) should be considered, not just that of the starting substances (IAS). Safety



- 1 The PTS online studio: Introduction by Dr. Harling.
- 2 Origin of conference participants by country.
- 3 Screen view of the conference, Dr. Kleebauer presents the program.

### Paper & Board for Food Contact

#### Agenda – Wednesday, 03.03.2021

<p><b>08:30</b> Technical Introduction &amp; Roles – MS Teams</p> <p><b>09:00</b> Welcome &amp; Opening Dr. Ingo Harling – PTS Dr. Markus Kleebauer – PTS</p> <p><b>09:15</b> Current FCM Legislative Developments in Europe and Germany – An Update Katharina Adler Bundesministerium für Ernährung und Landwirtschaft (BMEL)</p> <p><b>10:45</b> The new Council of Europe FCM-Resolution CM/Res(2020) 9 on the safety and quality of materials and articles for contact with food Dr. Ingo Ebner Federal Institute for Risk Assessment</p> <p><b>11:15</b> The new ECMA Good Manufacturing Practice Guide – Approach and provided guidance Jen Ganten ECMA – The European Carton Makers Association</p> <p><b>11:45</b> Influence of relative humidity on the transfer of volatile organic compounds from paper and board to Tencel® Wolfgang Wenz TU Dresden – Professor für Lebensmittelkunde &amp; Backwarenherstellung</p>	<p><b>10:15</b> Lunch Break</p> <p><b>10:30</b> EUPA Guidance on Migration Test Methods for the evaluation of substances in printing inks and varnishes for food contact materials Werner Ochse European Printing Association – EUPA</p> <p><b>10:35</b> Optimization of packaging through software-based prediction of shelf life Dr. Matthias Riemel Fraunhofer-Institut für Verpackungstechnik &amp; Verpackung IVV</p> <p><b>14:00</b> Standard Update – Update on Classification and Possible Impacts Dr. Martin Eder Verpackung Germany GmbH</p> <p><b>14:30</b> Panel discussion Chair: Dr. Ingo Harling – PTS Dr. Markus Kleebauer – PTS</p> <p><b>15:00</b> End of day 1</p>
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**Dr. Markus Kleebauer**  
Project Manager  
Functional Surfaces

or equipment as a whole. Other possible changes relate to the deletion of the entry of natural wood flour and wood fibers as plastic additives due to a lack of information, particularly with regard to toxicological assessment (EFSA 2019 statement). “Bamboo articles” such as coffee to go containers, which are melamine resin articles with added bamboo, are not marketable according to Regulation 10/2011, since, according to EFSA, bamboo is not a wood and is therefore not an approved additive/filler for plastic FCM.

National projects such as the “Printing Inks Ordinance” and the “Mineral Oil Ordinance” are still being coordinated internally by the federal government and are both being pushed forward, as the Commission has not promised any European measures.

#### **The new Council of Europe FCM-Resolution CM/Res (2020) 9 on the safety and quality of materials and articles for contact with food**

*Dr. Ingo Ebner, Federal Institute for Risk Assessment (BfR)*

Dr. Ebner presented the Council of Europe resolution published on October 7, 2020 for FCMs that are not regulated by specific individual measures. The Council of Europe resolution FCM supplements EU and national regulations and fills a regula-

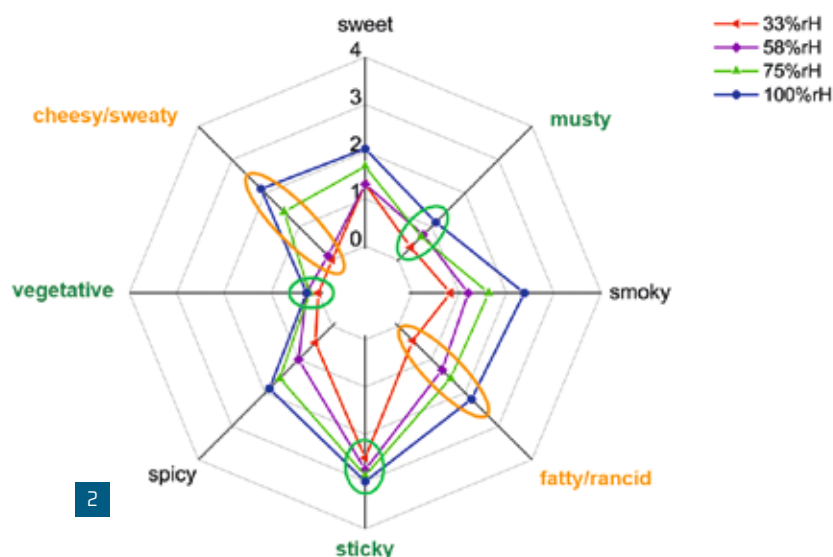
levels and rules are to be defined as to how this is achieved (e.g. through EU legislation or self-regulation), GMP rules are to be strengthened. A graduated approach based on different hazard classes (public risk assessment vs. self-assessment) is being considered: 1. CMR, endocrine disrupting substances, persistent, bioaccumulative, toxic; 2. substances with specific properties (nano), 3. rather harmless, low migration. Ms. Adler also pointed out the influence of accompanying legislative initiatives such as the “EU Chemicals Strategy for Sustainability” and for a toxic-free environment, which provide for a ban on the most harmful chemicals in consumer products (including food contact materials).

Safer and more sustainable FCM should be promoted. The evaluation of the safety of reuse and recycling as well as the exclusion of risks from contamination should be carried out according to clear rules. Coherence and consistency with environmental legislation is a stated aim. Furthermore, the Commission plans to regulate the requirement of declarations of conformity for all types of FCM to enact.

With regard to the Plastics Ordinance 10/2011, the 15th Amendment Ordinance introduced that for FCM for repeated use, the migration from the first to the third test must not increase. In addition, rules have been introduced to check the transfer of components from food (processing) plants



## Sensory analysis



- 1 FCM with bamboo additive – not marketable according to plastic regulation 10/2011.
- 2 Sensory impression of corrugated cardboard base paper (testliner) as a function of the relative humidity (rH).

tory gap. The aim is to improve consumer protection against FCM substances and to contribute to the harmonization of regulatory approaches across Europe.

The resolution is supplemented in the appendix by "Guidelines for food contact materials" – and accompanying "Technical Guidelines" to cover material-specific questions and for conformity documentation/declaration of conformity. In addition to specifications on substances used and their risk assessment, guidelines for labeling, traceability, GMP, declaration of conformity and accompanying documents as well as conformity tests are given. A specific resolution on FCM made of paper and cardboard is about to be published.

### The new ECMA Good Manufacturing Practice Guide – Approach and provided guidance

Jan Cardon, ECMA – The European Carton Makers Association

Hot off the press Jan Cardon presented the new ECMA GMP guidelines of the European cartonboard manufacturers' association. This is based on common standards of the food industry such as the FSSC 22 000 and the BRCGS Global Standard Packaging Materials Issue 6. Many helpful flow diagrams and decision trees guide through the complex of good ma-

nufacturing practice, allow to identify critical control points based on the HACCP concept and to derive measures at crucial points in the cardboard manufacturing process.

### Influence of relative humidity on the transfer of volatile organic compounds from paper and board to Tenax®

Nancy Wolf, Sylvie Hoyer, Prof. Dr. Thomas Simat, TU Dresden – Chair of Food Science and Food Contact Materials

Interesting comparisons of migration studies on the simulant Tenax® as well as sensory tests of paper under the influence of the relative humidity (RH) were presented by Ms. Wolf from the TU Dresden/AK Simat. The exemplary results of the migration tests on corrugated cardboard base paper (testliner) also showed that "wet dogs" smell stronger than "dry dogs": significantly more volatile organic substances (VOC) were released at higher humidity, in particular  $\geq 75\%$  rH. A completely different sensory impression was also created when the humidity changed. In order to evaluate the importance of the knowledge for future test strategies, investigations of further types of paper are planned.

### EuPIA Guidance on Migration Test Methods for the evaluation of substances

### in printing inks and varnishes for food contact materials

Werner Oechsle, European Printing Association – EUPIA

How to check the safety and migration of substances from printing inks and varnishes for FCM, Werner Oechsle presented on the basis of the EUPIA guidelines, which were last updated in August 2020. This industry guide addresses both printing inks for non-direct and direct food contact (DFC). He recommends testing under worst-case conditions (using a screening approach); which, however, is not intended as a substitute for the conformity test of the final printed food contact materials. The following approach is suggested in the test hierarchy: "Worst case" – calculation, modeling of the migration, accelerated migration with test simulants and, if the conformity is still unsure, migration test with the real food in the planned use of the paints and varnishes. The printing test pattern to be generated should preferably reflect the final packaging application that will be used in the field. This should be done as precisely as possible, taking into account the printing and drying process, the weight of the film and the type of substrate. When selecting the test conditions, the type of substrate (cardboard, film), the contact (direct/not direct) and the food





properties (fatty, moist, dry) are taken into account in order to select the appropriate simulant and contact time.

### Optimization of packaging through software-based prediction of shelf life

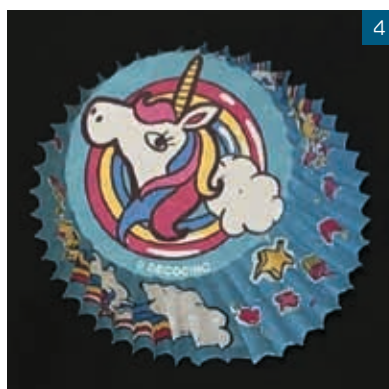
*Dr. Matthias Reinelt, Fraunhofer Institute for Process Engineering & Packaging IVV*

How software support can be used to develop new packaging solutions was demonstrated by Dr. Reinelt from Fraunhofer IVV. The varied interactions between the packaged goods and the packaging material, which cause parameters such as loss of aroma, oxidation, outgassing, gas exchange required for breathing, microbiological growth and moisture, can be represented in algorithms and the influence of the various levers can be considered and an optimum can be recommended. Lengthy storage attempts of several months can be avoided by creating a digital twin.

### Titanium Dioxide – Update on Classification and Possible Impacts

*Dr. Martin Erben, Venator Germany GmbH*

An update on the classification of titanium dioxide and the resulting effects was provided by Dr. Martin Erben. In September



3 Pizza box packaging can be made grease-proof with PFAS – the ban in Denmark makes alternatives necessary.

4 Colorfully printed muffin tin.



ber 2017, ECHA's Risk Assessment Committee (RAC) proposed the classification of TiO<sub>2</sub> as suspected carcinogen (Cat. 2) if inhaled. The Commission accepted the classification proposal on October 4, 2019 and it was published in the Official Journal in February 2020 after more than 2 years of regulatory deliberations. From October 1, 2021, the classification of TiO<sub>2</sub> will be binding after an 18-month transition period. This now results in various labeling regulations for titanium dioxide as a solid itself, but also for liquid mixtures and solid mixtures containing TiO<sub>2</sub> with a content of titanium dioxide particles of 1% or more, which have an aerodynamic diameter of 10 µm or less. The classification as carcinogenic by inhalation only applies to mixtures with a relevant aerodynamic diameter in powder form. The classification of the mixtures is based on workplace exposure regulations, which are simulated using a

rotating drum or in a drop tower in order to simulate the behavior of titanium dioxide powder (EN15051). The detection takes place by filter, cascade impactor, laser diffractometry or ToF spectroscopy. The classification as a CMR substance in powder form also has an impact on regulations in the use of cosmetics and toys, as well as on the admissibility of eco-labels – CMR substances are mostly excluded here.

### The new Danish Regulation: PFAS ban in paper & board

*Mette Holm, Ministry of Food, Agriculture and Fisheries, The Danish Veterinary and Food Administration*

Due to toxicological concerns, a possible health risk and known environmental persistence, Denmark has been discussing and preparing a ban on per-/polyfluoroalkyl substances for food contact materials,

### Thermal paper in daily use



especially in paper and cardboard, since 2015. Mette Holm reports on this. In 2019, the ban on using PFAS for FCM made of paper and cardboard was passed, which came into force on July 1, 2020 (681/2020). Due to the ubiquitous distribution of PFAS – including from paper recycling – one could not orientate oneself to the very low toxicologically acceptable values ??for organic perfluorocompounds when setting a limit value, but had to use 20 µg PFAS, measured as Total Organic Fluorine (TOF) / g Paper, to set an indicator value for an unavoidable background pollution. Papers with a functional barrier that prevents the migration of PFAS into food are exempt from the ban. However, there is no reliable analytical method for the PFAS class, which comprises over 4,500 different individual substances, neither as a substance nor as a migration method. The enforcement and legal security of this requirement was therefore questioned in lively discussions by the conference audience. According to Mette Holm, there are enough PFAS alternatives to make the papers grease-proof.

#### Total organic fluorine (TOF) analysis for PFAS impurities determination in recovered paper grades

Sandro Kuttig, Eurofins Umwelt Ost GmbH, Freiberg

Sandro Kuttig continued the PFAS discussion with his lecture on Total Organic Fluorine (TOF) analysis for determining PFAS as a sum parameter. For this it is necessary to differentiate between inorganic and organic fluorine compounds. The determination

on takes place via combustion and subsequent fluoride determination by means of ion chromatography. A large discrepancy between the individual determination method with 22 recorded PFAS individual substances and the TOF determination showed that only a small percentage of 0.00004–11.3% was recorded with the specific methods compared to the TOF method. Also, some matrices, especially those with a high content of inorganic fluoride, cause interference in the TOF methodology, which leads to indeterminability, even though PFAS were included.

#### Thermal developers – BPS and other BPA Alternatives

Annemarie Greb, TU Dresden – Professorship for Food Science & Consumer Goods

Ms. Greb reported on systematic, observational studies by the TU Dresden from 2015 to 2020 on the replacement of bisphenol A in thermal papers (examination of approx. 100 samples per year). As early as 2015, Pergafast 201's share of the developers used was over 30% and exceeded the BPA share for the first time in 2019. With the ban on BPA in the EU, the proportion of BPA rose from under 15% (2015–2019) to 40% in 2020, although Pergafast 201 still makes up the majority with 45%.

In particular, the thermal papers are recycled via parcel stickers and adhesive labels, while receipts are partially sorted out. For BPA and BPS it has been shown in studies by the food control that these recycled fibers contaminate. This year, BfR Recommendation XXXVI includes a restriction of 0.05 mg / kg for the transition from BPS from recycled paper to food in addition to that for BPA. However, for most BPA replacement developers only incomplete information about persistence and human and environmental toxicology is available. There are also thermal papers that do not use any developer substances. It won't get boring here, says Annemarie Greb.

#### Multi-client project BPS, BPA, PERGAFAST 201, PFAS

Max Schneider, Paper Technology Foundation (PTS)

Already unsuitable recovered paper qualities can lead to the indicator level for PFAS (TOF) being exceeded and thus result in the requirement for a functional barrier, reported Mette Holm. BPA and its substitutes BPS and Pergafast put a strain on the waste paper cycle, says Annemarie Greb. In order to get an overview of the entry of these substances into the paper cycle through different types of waste paper,





- 1 Thermal papers in daily use.
- 2 Paper straws.
- 3 Titanium dioxide: classified as a solid and a category 2 carcinogen – what does that mean for FCM?

the PTS has therefore launched a multi-client project. Max Schneider presented the details of this project. In addition to the content and migration measurements, the result should be a conclusion about the used paper qualities and their contamination with the examined substances BPA, BPS, Pergafast and PFAS (TOF). The results are made available exclusively in anonymized form and exclusively to the project participants. Participation in the project is open to all interested paper and processing companies and is still possible until the beginning of June 2021.

#### **Aluminum release of FCM – outcome of research work**

*Antje Kersten, TU Darmstadt – Department of Paper Manufacturing & Mechanical Process Engineering (PMV)*

Limiting the release of aluminum from paper FCM into food was included in the BfR Recommendations XXXVI, reported Antje Kersten. When testing according to EN 645 (cold water extract), however, a few important things should be observed when preparing the sample, in order not to include coating particles from e.g. kaolin or to obtain incomparable results. Influences such as pH value and ionic strength of the water used, sample size reduction and filtration require more precise details. Comparisons with food migrations showed where reality and simulation of aluminum release match or differ. The release of aluminum is only relevant if the paper co-

mes into contact with moist and especially acidic foods foreseeable. The findings are to be incorporated into the revision of EN 645 standards as well as a separate aluminum regulation.

#### **Drinking straws made of paper – technical issues**

*Dr. Imke Cravillon, DREWSEN SPEZIALPAPIERE GmbH & Co. KG*

Dr. Imke Cravillon presented the technical challenges in the production of paper straws. The Single Use Plastics regulation gave these paper alternatives a boom. The release of MCPD, DCP, mineral oil hydrocarbons, PAA and photoinitiators have already been a challenge in the past. There are also some technical performance details that need to be addressed, such as delamination in the drink, premature softening, outgassing of carbonated drinks and an unpleasant mouthfeel on the lips. This must be optimized so that the product is accepted by customers and consumers. A plant-based coating could help here.

#### **Chloro propanols release from FCM paper: recent results from an official control laboratory**

*Lydia Richter, Chemical and Veterinary Investigation Office CVUA, Stuttgart*

Lydia Richter from CVUA Stuttgart also reported results on the release of MCPD and DCP from straws into the cold water extract (EN 645). Here, slightly less than half

of the paper straw samples examined (6 of 13) did not comply with the guideline value of the BfR recommendation for MCPD. With a total of more than 108 paper samples as well as baker's bags, party plates, serviettes, kitchen towels or muffin molds, this MCPD guide value was exceeded in only 6%, while DCP could be determined in only 3 samples (3%). The paper industry is well on the way to minimizing this.

#### **Halal production of paper and board – requirements and certification**

*Farhan Tufail, Halal Certification Services GmbH*

Farhan Tufail gave the entertaining final lecture live from Pakistan. He explained when a product is „halal“. In a nutshell: „Everything that is not explicitly forbidden is allowed“. For example, animals that are not properly slaughtered according to Islamic laws and the ingredients obtained from them are prohibited. Packaging material must be checked for the absence of hidden ingredients such as animal stearates, which are used in the manufacture of plastic containers. According to Mr. Tufail, packaging material manufacturers will soon be inundated with Halal inquiries as awareness and Halal certification grow. ||| **Dr. Antje Harling, Papiertechnische Stiftung (PTS) Heidenau**





Interview

## Review: virtual.drupa 2021

We spoke to Sabine Geldermann, Director drupa and Global Head Print Technologies at Messe Düsseldorf, about her conclusion, the sustainability of the platforms created and her expectations for the next, “real” drupa.

**M**s. Geldermann, on the final day of virtual.drupa there was a press release from Messe Düsseldorf with figures on the event. In particular, the high level of response was highlighted. What is your conclusion?

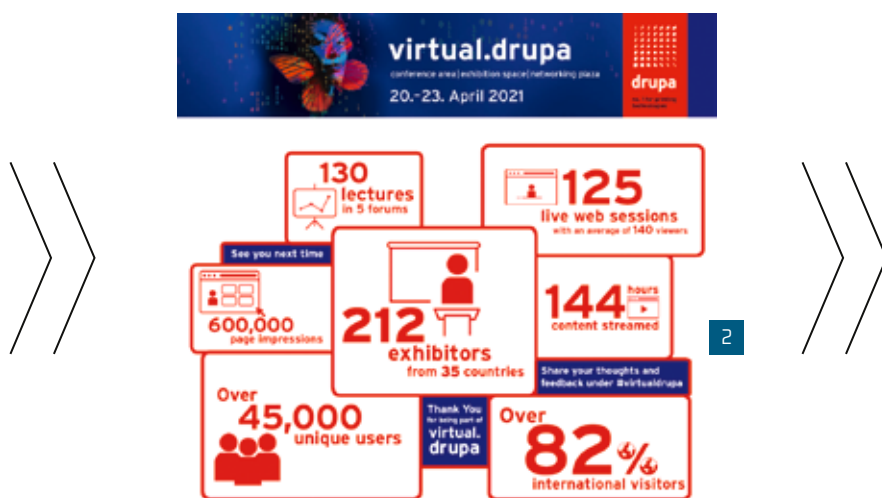
Absolutely positive! This year presented us all with new challenges. We have managed to transfer a leading global trade fair like drupa from a face-to-face event to a virtual one. With its three pillars “Exhibition Space”, “Conference Area” and “Networking Plaza”, virtual.drupa was an important milestone on the way to interacting with the global community again in 2024 and gave exhibitors and visitors the opportunity to gain new leads, reactivate business and network. It has ensured an indispensable transfer of knowledge that is based on the needs and current topics of the industry. Our positive balance is also underpinned by impressive KPIs. Almost all global players were on board among the 212 exhibitors. Our concept also worked out on the visitor side: 20,500 registered visitors, 45,000 unique users and 600,000

page views in 4 days are remarkable, plus the lively participation in the exhibitor web sessions and the streams in the conference area. I was particularly pleased with the 82 percent internationality of the visitors. The drupa community networked and exchanged ideas virtually from 155 countries across all borders and time zones.

**The technical effort for programming, the provision of the various platforms, streaming, databases and performance is certainly high in this dimension and required considerable investments in advance. How should the IT infrastructure created for virtual.drupa continue to be used?**

Sustainability is an important principle in all of our investments. It is not our aim to develop “quick fixes” or short-lived events. For virtual.drupa, for example, we built on existing digital modules and processes and expanded innovative components and functions where necessary. We will also use these for future online events and hybrid trade fairs. In order to get the most

out of the event and indispensable added value for our customers, we have decided to make the virtual.drupa portal available to the global print and packaging community until the end of the year – still free of charge for everyone, just one registration required. This means that all functions and features such as the exhibitor showrooms can continue to be used and that our excellent video library with all recorded streams will be available free of charge until then. We would definitely like to recommend this impressive pool of knowledge to the industry as still highly relevant and inspiring content. We are also planning a virtual conference day in autumn with top-class speakers and relevant topics from the industry. As Messe Düsseldorf, we will of course also use the expanded infrastructure and the experience we have gained for other trade fairs and projects, build on it and supplement and optimize it where necessary. We cannot and do not want to turn back the digital wheel, because the entire trade fair landscape is changing towards hybrid formats. We are challenged to continue to offer our customers and visitors the best



- 1 Didn't take place in Düsseldorf this time: The virtual.drupa
- 2 Factsheet: virtual.drupa 2021.
- 3 Sabine Geldermann.

possible service and to meet customer expectations.

**Can the implementation of virtual events be a profitable business model for an organizer of face-to-face trade fairs?**

That certainly depends on the respective requirements. Nonetheless, it has been an investment in a high quality platform in the first place with the aim of providing the industry with knowledge transfer and business reactivation. Based on the feedback from our customers around the world, we succeeded in doing this very well. But in the long term, we see pure online formats more as a supplement to existing offers, or – as is now the case in pandemic times – as a necessary bridge until a face-to-face event is possible again. We believe that the future of trade shows is a hybrid one that combines the best of both worlds. Our exhibitor and visitor feedback shows us that digital trade fairs are by no means a substitute for the analog customer experience. Studies confirm this very impressively. The elimination of physical meetings and chance encounters is a massive cut in the sales process. That is why we want to use our now established digital infrastructure primarily for hybrid trade fair formats in the future and extend the “real” trade fair on the Internet in a sustainable manner, both spatially and in terms of time.

**How do you rate the sustainability efforts of the exhibitors and the industry in general? With this format, did you have an insight into the exhibition that could be compared to a “real” drupa?**

Issues such as sustainability and the circular economy were already playing a significant role in the industry before the pandemic, and this was reinforced by the impact of the pandemic. Most companies are now aware that sustainable management and environmental protection are not only relevant and compellingly compatible with corporate culture and responsibility (CSR), but also represent a real competitive advantage. At virtual.drupa, the topic of circular economy was therefore the focus of the conference area alongside artificial intelligence, connected consumer and platform economy. My highlight - and at the same time an important appeal - was the keynote by the journalist and author Dr. Gabrielle Walker on “All change: Implications of the climate megatrend for the printing industry”. As for the second part of your question, it is obviously difficult to compare the two formats directly. A lot of things happen more spontaneously and unplanned at a face-to-face event - a chance encounter here, an exciting discovery there. Another convincing USP of drupa are running machines on the premises and the opportunity for potential customers to experience capital

goods with all their senses. This is exactly where digital formats reach their limits. The online format, on the other hand, offers the flexibility to watch targeted streams, live web sessions, webinars and exhibitors across all time zones 24/7 and, in some cases, to delve deeper into topics than would have been possible in normal, hectic presence at the trade fair. It also offers the option of viewing content retrospectively. For me, this is a clear advantage of the digital trade fair experience, which also provides very valuable impulses on demand after the event.

**What are you most looking forward to at drupa 2024?**

Since it was founded 70 years ago, drupa has stood for a unique and very special atmosphere. It has always been a place for inspiration and innovation. The international community is currently looking forward to a certain digital fatigue to see each other face to face in Düsseldorf in 2024. For drupa 2024, I hope that this will be possible again and that the global drupa community will meet up with colleagues and business partners in the evening to network for a glass of Altbier under safe conditions and after intensive days at the trade fair.

**Ms. Geldermann, thank you for talking to us! |||**

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## Upcoming Issue

- Bellmer: Tailor-Made Types of Headboxes for Different Applications
  - Leipziger Typotage: What can Typography do?
  - ABB: A Look at Cyber-security
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## Paper Art

# The “Haus des Papiers” opens its doors

The time has come – finally: The world’s first museum for sculptural fine paper art – Haus des Papiers – is, after a “closed” vernissage on May 22/23, regularly open to the public since May 28th, 2021.

The Haus des Papiers is a joint project of the partners Hahnemühle, d’image, Canon and paper positions in Berlin and shows paper art in all its creative diversity. The museum is to become part of a large network and the European center for paper expertise, paper art and printing technologies. It is, however, already an inspiring place of unique art, with works by Rosemarie Trockel, Goekhan Erdogan, Monica Bonvicini and Leiko Ikemura.

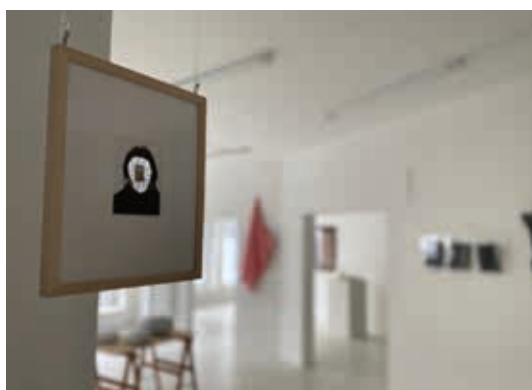
As the museum’s website states: “Ever since paper has existed, people have been fascinated and touched by this material. Tenderness and strength at the same time. As a basis for a stroke or as a material out of itself. From the process of creation, through artistic design, to the brutal transformation into another aggregate state: the possibilities are endless. No other material in art is as sensual, present, and changeable as paper. Let’s build it a house.”

Some of the works on display have won the Paper Art Award and have been purchased by the museum’s collection. Another part are loans from artist friends and galleries.

The Haus des Papiers is located in the Coca-Cola-Haus at Seydelstraße 30/corner Elisabeth-Mara-Straße, 10117 Berlin-Mitte. It is open from Friday to Saturday 10:00 to 17:00, and on the last Wednesday and Thursday of every month from 13:00 to 20:00. For more information on the artists on show or how to get there, visit [www.hausdespapiers.com](http://www.hausdespapiers.com). |||



Das Haus des Papiers in Berlin ist seit Ende Mai regulär für die Öffentlichkeit zugänglich.



Die Exponate im Museum zeigen Papierkunst in seiner ganzen kreativen Vielfalt.

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### The Ma[n]son Family

Designer Jonathan Barnbrook originally called this typeface Manson (after American serial killer Charles Manson) "to express extreme opposite emotions - love and hate, beauty and ugliness," he has said. Its distributor, Emigre, Inc., suggested the name be changed to Mason, as the letterforms also evoke stonemasons' work, Freemasons' symbology, and pagan iconography.

In its design, Barnbrook said, he was influenced by nineteenth-century Russian letterforms, Greek architecture, and Renaissance bibles; the font also displays many references to popular culture, politics, and typographic history. The font was released in 1992, was kind of one of the first modern gothic fonts in the digital age and can be seen as a product of the technological and cultural influences of the time. It is now part of the Moma digital collection ([www.moma.org/collection/works/139321](http://www.moma.org/collection/works/139321)).

Barnbrook: "The actual design here was for one of the boards that was in a retrospective I had at the Design Museum in London. It's normally 2A0 – see [www.barnbrook.net/work/design-museum-friendly-fire/](http://www.barnbrook.net/work/design-museum-friendly-fire/)." The font was also used for the artwork on the 1994 album "In The Hot Seat" by British progressive rock legends Emerson Lake & Palmer.



