



# unfolded

A Paper about MM Board & Paper

**I am strong  
for you.**

**ALASKA STRONG – GC2**  
180 gsm  
from MM Kotkamills, Finland,  
keeps frozen food fresh

**I make  
you pretty.**

**ALASKA WHITE – GC1**  
200 gsm  
from MM Kwidzyn, Poland,  
guarantees a sophisticated  
appearance for cosmetic and  
personal care products

**MM TOPLINER**

180 gsm  
from MM Neuss, Germany,  
turns every corrugated cartonboard  
packaging into an eye-catcher

**I put you  
on display.**

**I am an  
early riser.**

**MULTICOLOR MIRABELL – GD2**  
230 gsm  
from MM Frohnleiten, Austria,  
keeps cereals fresh and crispy

**They call me  
pharma queen.**

**MM GT WHITE PH 0.3 – GT1**  
250 gsm  
from MM Gernsbach, Germany,  
specialist for pills and tablets

Page 6

## Product Variety

From Cartonboard to Paper  
to Mechanical Pulp

Page 16

## New Mills, New Locations

An Overview from North to South

Page 34

## Sustainably Successful

Our Contribution to  
Climate Protection



# Content

## 4 Mill overview

Our locations across Europe

## 6 Product diversity

From cartonboard to paper to mechanical pulp

## 12 Interview

Tom Kratochwill on the MM B&P sales strategy and how it benefits customers

## 14 Multiple awards

Numerous awards for our products

## 16 Our mills introduce themselves

16 MM Kwidzyn

18 MM Kotkamills

20 MM Kolicvevo

22 **Interview:** Tomi Lonka on recent mill conversions and their strategic importance

23 MM FollaCell

24 MM Frohnleiten

26 MM Gernsbach

28 MM Neuss

## 30 Innovation at MM

From the idea to the finished product

## 34 Sustainability at MM

How a life cycle assessment for packaging is created



**Tom Kratochwill**  
Chief Sales Officer and Deputy  
CEO MM Board & Paper

## Dear readers,

You are holding the first issue of the new edition of our »unfolded« magazine in your hands.

Not only have we given our magazine a fresh new look, the Board & Paper Division has also essentially reinvented itself in the last two years.

Newly acquired mills were followed by a new company name with a modern logo and claim. These mills added further products, including even more virgin fibre board grades, kraft papers and uncoated fine papers.

Through these acquisitions and the expanded MM-Team, we have also gained many new colleagues with different invaluable skills. Every day we grow a little closer together and get better and better.

The year 2023 will essentially be characterised by major investments in our mills and represents another milestone in the history of MM Board & Paper: This will enable us to further develop our renowned cartonboard qualities, to initiate disruptive innovations and also to significantly improve our flexibility. The increased production capacities will also support our customers' growth efforts and guarantee you unrestricted delivery reliability.

If you are reading this, then you have already discovered some of our – in some cases new – cartonboard qualities on the cover. On the following pages, we will present our entire product range along with its many possible applications.

Our guiding principle remains: We want to offer our customers trust and security and impress them with innovations in every area!

Thank you for your interest in MM Board & Paper and we wish you an inspiring read

Tom Kratochwill

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# Europe's leading cartonboard producer with a high-quality paper range

6

Cartonboard mills in five European countries

1

Mechanical pulp mill and sawmill

4,800

Employees in the MM Board & Paper Division worldwide

11

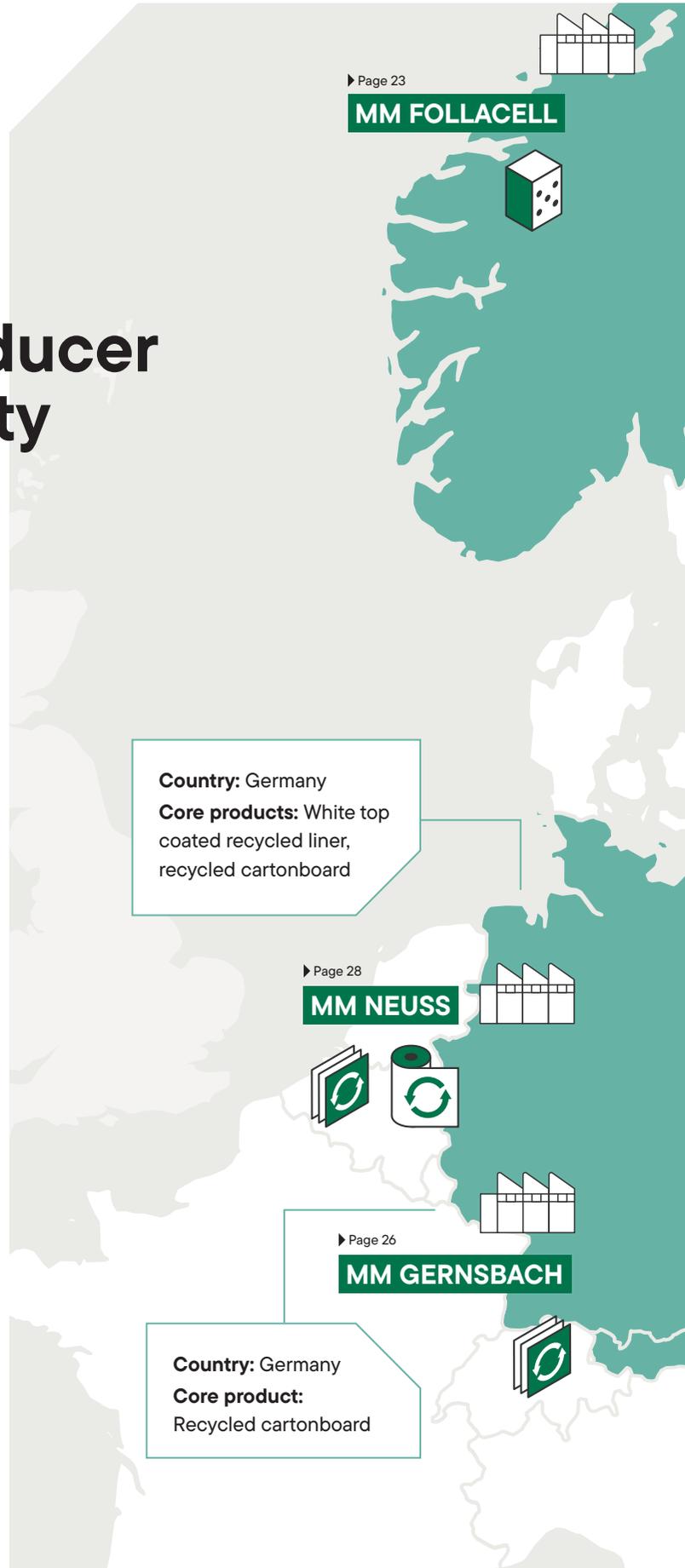
Board and paper machines

2.6 m

tonnes of capacity for cartonboard, liner and paper

~ 110

export countries



**Country:** Norway

**Core product:**

Mechanical pulp  
(CTMP & BCTMP)

**Country:** Finland

**Core products:** Virgin fibre cartonboard, barrier board, cupstock (Brand: ISLA®), world market leader in saturating kraft paper (Brand: Absorbex®), sawn timber

▶ Page 18

**MM KOTKAMILLS**



**Country:** Poland

**Core products:**

Virgin fibre cartonboard, uncoated fine papers, packaging kraft paper (Brand: IPACK™)

▶ Page 16

**MM KWIDZYN**



▶ Page 24

**MM FROHNLEITEN**



**Country:** Austria

**Core product:**

Recycled cartonboard

▶ Page 20

**MM KOLICEVO**



**Country:** Slovenia

**Core products:** Virgin fibre cartonboard, recycled cartonboard, white top coated recycled liner



Virgin fibre cartonboard (FBB)



Recycled cartonboard (WLC)



White top coated recycled liner



Uncoated fine paper (UFP)



Packaging kraft paper (PKP)



Saturating kraft paper (SKP)



Mechanical pulp (CTMP & BCTMP)



Sawn timber



**Brilliant surface: Virgin fibre cartonboard is ideal for high-quality cosmetics or personal care packaging solutions.**

# Cartonboard, paper & more

The comprehensive range of MM Board & Paper continues to grow: Since the acquisition of MM Kwidzyn and MM Kotkamills, products have been managed in 8 categories – from cartonboard to paper to mechanical pulp and sawn timber. We introduce them.

## CARTONBOARD

### Virgin Fibre Cartonboard

*Also: Folding Boxboard (FBB)*

MM Board & Paper is the third largest producer of virgin fibre cartonboard in Europe. For our virgin fibre cartonboard, we use exclusively high-quality wood pulp from strictly controlled production and thereby guarantee consistently high quality. Thanks to excellent surface properties and ideal sensor values, our virgin fibre cartonboard is the first choice for sophisticated packaging. The wood comes from responsible forestry.

Our range also includes water-based dispersion coated barrier boards (ISLA® and ALASKA® BARRIER), which can replace PE (polyethylene) coated board and is, therefore, perfect for sustainable and easily recyclable paper cups and other products that need safe and hygienic

packaging. In September 2022, we renamed our virgin fibre cartonboard qualities: The already well-known brand ALASKA® was extended to the majority of our products and a new brand ADRIATICA® was introduced to the portfolio. Only the names have changed – the fibre structures and composition as well as board construction remained the same.

#### What's new with Virgin Fibre Cartonboard from MM?

- **ALASKA® BARRIER GREASE:** new quality with moisture and grease barrier
- For packaging very greasy frozen products (e.g. pastry dough), fish fingers, pizza, baked or breaded foods, bouillon cubes
- Guarantees high packaging stability even at low temperatures, while at the same time the package surface is protected against annoying grease spots and discolourations
- Fluorine-free; can replace PE-barriers in many applications
- Produced at MM Kotkamills

## CARTONBOARD

**Recycled Cartonboard**

*Also: White Lined Chipboard (WLC)*

Cartonboard made from recycled fibres is the epitome of sustainable packaging: At over 80 per cent, cartonboard has the highest recycling rate of all packaging materials in Europe. Cartonboard fibres have an almost unlimited number of lives – they can be recycled more than 25 times. The proportion of recycled fibres in the cartonboard varies from grade to grade.

MM Board & Paper is one of the global market leaders in the field of coated recycled cartonboard: The dozens of different varieties primarily consist of coated duplex and triplex board qualities, which differ in terms of their board structure or fibre mix. Special grades with a grease barrier protect packaging against annoying grease spots and discolouration or, thanks to the freeze barrier, can guarantee maximum packaging stability even at low temperatures.

FOODBOARD™ is our innovative recycled cartonboard with a functional barrier which protects against migration of unintended substances such as mineral oils or phthalates and thereby guarantees the highest possible product safety. Moreover, FOODBOARD™ preserves the natural taste and smell of the food thanks to its aroma impermeability. For example, these properties make it possible to dispense with the additional cellophane wrapping for tea.

**Recycled cartonboard with a functional barrier protects sensitive foods such as cereals, tea or rice against environmental influences.**

As part of the Multi-Mill concept, MM produces recycled cartonboard qualities at several production sites with identical quality. This offers customers maximum delivery reliability even for exceptionally large order quantities. MM Board & Paper sources recovered paper from certified sources in European metropolitan areas to ensure optimal origin and quality control.

#### **What's new with Recycled Cartonboard from MM?**

- New recycled cartonboard quality: **MM GT White**
- Excellent white appearance, high brightness on the top and reverse sides
- Ideal for cosmetic and body care applications
- Special quality MM GT White PH 0.3 (see also on the cover of this issue): has optimum laser and inkjet coding properties, making it ideal for pharmaceutical folding cartons
- Produced at MM Gernsbach



LINER

▶ **White Top Coated Recycled Liner**

Liners are cover layers that are used in the production of corrugated board. MM Board & Paper is one of the leading producers of white top coated recycled liner in Europe. Our product portfolio offers a comprehensive range of liners for offset and flexo printing.

Because of its incredible surface characteristics, such as brightness, gloss and smoothness, liners from MM guarantee brilliant appearance on all kind of products. Moreover, our liner qualities stand for high process output at all stages of processing.

This makes them an excellent choice for high print quality and premium branding: They are popular for displays, shelf-ready packaging, general packaging, and bag-in-box solutions.

**What's new with Liners from MM?**

- New grammage (250 gsm) of MM BiB-Liner™, our liner for the growing bag-in-box market
- Produced at MM Kolicovo
- Rebuild in our Neuss mill will transform the current board machine into a state-of-the-art linerboard machine: The new sizer and curtain coater will enable us to offer our established liner product range with premium technical specifications



Liners are cover layers for corrugated board.

**Robust packaging kraft paper is not only more sustainable but also reliably protects fresh food such as pastries.**



PAPER

## Uncoated Fine Paper (UFP)

This category includes copy paper for at home as well as offset paper for processing in printers: MM Kwidzyn offers a wide range of uncoated fine papers for home and office use as well as for commercial printing.

The MMBLOOM and POL brands include paper for standard inkjet and laser printers in various quality levels: They cover every application in the office, from large quantities of black-and-white copies to high-quality coloured handouts. The optimal whiteness and density guarantee the highest level of printing and eye-friendly contrast. Offset paper (e.g. for catalogues or notepads), paper optimised for laser printing (e.g. for invoices and receipts) and a type of paper for preprint applications such as stationery are marketed under the SPEED-E brand name.

### What's new with Uncoated Fine Paper from MM?

- 30<sup>th</sup> anniversary of the POL brand
- POL CSR Campaign was a finalist at the EOPA Awards (European Office Products Awards)

PAPER

## Packaging Kraft Paper (PKP)

Our IPACK™ is a machine finished (MF) paper developed for various packaging applications to protect and market everyday goods – from carrier bags to flour and sugar bags to wrapping paper. IPACK™ can be used also as a base for silicone coating, aluminium foiling, PE coating or waxing. Its considerable strength, high smoothness and excellent formation parameters provide great printability and perfect runnability through complex packaging material production processes.

IPACK™ is manufactured in white (bleached) and brown colour (unbleached) at MM Kwidzyn. All materials used come from sustainably managed forests.

### What's new with Packaging Kraft Paper from MM?

- New release base paper: IPACK™ ULTRA
- Meets the most demanding hygiene standards
- 100% virgin fibres for high strength properties
- Fibre composition and perfect formation enable low silicone consumption and a very good runnability during the production process
- Main area of application: as a base paper for silicone coating, paper for paraffin and waxing coating as well as paper for PE coating



## Paper

Encountered almost every day, but almost no one knows it: Saturating kraft paper gives furniture high durability, moisture resistance and easy-to-clean properties.



## PAPER

### ▶ Saturating Kraft Paper (SKP)

We are all constantly surrounded by it: saturating kraft paper can be found in almost every home. It is included in many floors, tabletops, furniture and doors, but also in mobile phones, knife handles, skis and even high heels. The most common application is as a core material for high-pressure decorative and industrial laminates that require high durability.

Absorbex® Saturating Kraft Paper is the world's leading saturating kraft paper brand from MM Kotkamills – the result of over 50 years of research and development work. Our high-quality papers made from unbleached pulp can be precisely tailored to the requirements of the end use and offer laminate producers a sustainable choice: the wood raw material used for Absorbex®, sawdust, is a by-product of sawmills whose wood comes from sustainably managed forests. In addition, recycled fibres are used for Absorbex® Eco products.

#### What's new with Saturating Kraft Paper from MM?

- Latest innovation: Saturating Kraft Paper, optimised to be used with lignin-based resins in the production of high-pressure laminates
- This product is one of five finalists in the Uusi puu (New Wood) competition that seeks for new innovative wood-based solutions in Finland

#### MM DIGITAL

### All cartonboard and liner products from MM available at a click

From the production preview to the product selection and booking to call-off from stock and delivery tracking: MM Board & Paper's digital sales and service platform enables customers to conveniently order cartonboard qualities online around the clock.

#### Are you interested in one of our products?

Follow the QR code and register with MM digital: ▶



## WOOD

## Mechanical Pulp

In the case of fibres obtained from wood for cartonboard and paper production, a distinction is made between mechanical pulp and cellulose. Significantly more wood pulp than cellulose can be obtained from the same amount of wood.

Our Norwegian mechanical pulp mill MM FollaCell produces so-called chemi-thermomechanical pulp from logs and wood chips, both in the unbleached variant (CTMP – unbleached chemi-thermomechanical pulp) and bleached (BCTMP – bleached chemi-thermomechanical pulp). This special process results in particularly high-quality mechanical pulp, which also has some of the beneficial properties of chemical pulp – such as the tear strength of the products made from it. The wood chips are first chemically pre-treated and then heated with hot steam before they are chopped up. By cleaning or washing twice, MM FollaCell can offer one of the cleanest (B)CTMP.

Depending on the type, pure softwood or a mixture of softwood and hardwood is used – all from sustainable forestry. In addition to folding boxboard, typical applications for mechanical pulp from MM FollaCell are absorbent products (e.g. tissues) as well as writing and printing paper.

**What's new with Mechanical Pulp from MM?**

- Wide range of tailor-made (B)CTMP, which can be manufactured between 250 – 600 CSF and 60 – 80 brightness
- Mill is also able to offer SW/HW CTMP – a mixture of softwood and hardwood (spruce/birch)



**No matter whether spruce or pine: sawn timber from MM Kotkamills includes wooden planks with more than 300 formats.**

## WOOD

## Sawn Timber

In the takeover of Kotkamills by MM Board & Paper in 2020/21, an integral part of the mill – the sawmill – became part of the group and sawn timber part of the product range. In Kotka, Finland, 210,000 cubic metres of sawn timber are produced from spruce (95%) and pine (5%) per year. Due to its high visual quality and because it is particularly strong, sawn timber from MM is mainly used for construction and joinery. The high strength results from the fact that conifers grow more slowly in the far north than in warmer regions. The by-products of the sawmill production process, wood chips and sawdust, are used as raw materials for the production of cartonboard and saturating kraft paper at MM Kotkamills.

The MM Kotkamills Wood's sawn timber range includes wooden planks in more than 300 formats.

**What's new with Sawn Timber from MM?**

2022 a real-time control of automatic log rotation was put in operation to further increase sawing line yield

Consistent product quality, delivery reliability, growth and increased customer experience are the cornerstones of MM Board & Paper's sales strategy.

# »It is important to give our customers security«

New mills, new products, expanded capacities, increased competences and many new colleagues: Tom Kratochwill, MM Board & Paper Chief Sales Officer and Deputy CEO, talks about how the MM Board & Paper sales strategy is implemented and how MM customers benefit from it in an interview.



**Mr. Kratochwill, what was the background behind the last two mill acquisitions by MM Board & Paper?**

**TOM KRATOCHWILL:** In addition to recycled cartonboard (WLC), we are establishing an even stronger position in the field of virgin fibre cartonboard (FBB). The acquisitions enable us to offer high quality virgin fibre cartonboard, including an attractive range of innovative barrier solutions that can replace PE-coated board. With MM Kwidzyn and MM Kotkamills, we now have two mills which enjoy an excellent reputation in the industry, are geographically well-positioned for future growth and produce other products in addition to virgin fibre cartonboard grades, like packaging kraft paper, saturating kraft paper or uncoated fine papers.

**Do existing customers also benefit from this?**

Yes, of course. Now we have six mills across Europe with increased capacity from which we can optimally supply our customers. This has increased our flexibility and we are also able to offer a so-called Multi-Mill concept for many products in our range. This offers our customers increased security, short delivery times and no restrictions in their growth efforts. Not to mention the additional expertise gained, the different cultures, the constant exchange of experience and ideas, which then drive innovation. Our potential is huge and we are constantly working on increasing it – in the interests of our customers.

**Cartonboard and paper prices were soaring in 2022, as were production costs. What is MM doing to achieve more stable prices this year?**

2022 was unique in history. Personally, I have never yet experienced anything like this. However,



I have learned a lot from it: In addition to delivery reliability, our customers also need confidence in a strong partner. You can minimise many of the risks, but you can never eliminate them entirely. The year 2023 presents us with new challenges where we need to demonstrate agility and apply what we have learned. In particular, the further development of energy prices in Europe is difficult to predict. Nevertheless, we want to provide our customers with greater price stability and planning security this year. Therefore, we have further extended the validity period of their contracts. We stand by that. In 2022, it was almost impossible to provide price guarantees lasting longer than two months.

**Where do you see the greatest cross-selling potential?**

The greatest cross-selling potential is certainly with virgin fibre and recycled cartonboard. We serve growth markets in both segments, for example food, pharmaceutical and cosmetics packaging. Our customers appreciate being able to choose between both product segments from the same supplier.

**MM Kotkamills even enables MM to sell pure sawn timber.**

Yes, and here are synergies too. There is a complete utilisation of the log. We use by-products, such as the sawdust produced by the sawmill, to produce pulp for Absorbex®, which binds CO<sub>2</sub> again in a sustainable manner.

**Who can customers contact if they are interested in products from other categories? What service does MM offer them?**

We started training our sales force in all of our products at an early stage so that they are always competent contacts for our customers.

In addition, we have Key Account Managers and Brand Owner Managers in sales who offer and assist negotiations covering the entire range in the sense of »one face to the customer«.

My recommendation to my people in sales is: »Be curious, ask questions – customers like to say what they need!« This is the only way both sides can learn something and be satisfied.

**In addition, MM digital also provides MM Board & Paper with a digital trading platform. What does the future hold?**

MM digital is very well established with our cartonboard and liner customers and has proven popular. In addition, it offers considerable advantages for our internal sales process and enables our customers to view and access available stocks at any time. Naturally, in the course of the SAP roll-out, we will implement MM digital in order to offer our customers the greatest possible convenience.

**What is the Central Sales Organisation?**

We want to offer our customers a standardised sales and marketing structure regardless in which MM mill a product is produced. Currently, they receive order confirmations, invoices etc. from the mills, they have different handling methods and processes. In the future, all sales activities will be bundled and documents will be standardised within the newly founded MM Board & Paper Sales GmbH.

The advantage for the customer is an organisational structure with uniform processing methods, with only one company as a contact person.

**Do you have a personal favourite product?**

I like nothing better than to tell family or friends at every opportunity that the packaging they are holding in their hands, the façade panel on the wall, the bread bag or even the copy paper, is from MM. I am proud of this, especially because they are more sustainable products that are used again and again for different purposes. Plus, there are so many ways to expand our products and their functions. ▴

## About

**Tom Kratochwill** looks back on a professional career in the cartonboard and paper industry spanning more than 28 years. He joined the MM Group in mid-2021, where he is responsible for Sales, Supply Chain and Innovation as a member of the MM Board & Paper Management Board as of November. Previously, he held diverse management positions in Germany and abroad. He is married and has two children.

# Excellently packaged

Our cartonboard and liner qualities are also real world stars as packaging: After winning prizes at renowned national and international competitions in the previous year, three of them followed up with the WorldStar Award at the beginning of 2023.

**W**hat do stone fruit, potatoes and a flying orchid have in common? They all come in multiple award-winning packaging made from MM Board & Paper cartonboard or liner.

For example, the practical and simultaneously recyclable stone fruit basket from the food retailer Hofer, which recently received no less than four awards: After the European Excellence Award 2021, the Brand Magnet in Gold and the German Design Award, the innovative basket, made of Browncolor (adorned the cover of our magazine), recently also won the WorldStar Award in the fruit and vegetables category.

## Precious potato packaging

The potato packaging developed by MM – also for Hofer – serves as a storage box and has also won multiple awards. The »potato crate« made of high-quality liner (see page 8) with a practical carrying handle already won the European Carton Excellence Award in 2022. Now it has also joined the ranks of the »world stars« of packaging in the fruit and vegetables category.





## Award for a headstand

Finally, the innovative packaging solution for the »Flying Orchid«, an upside-down orchid plant, also received a double award. The sophisticated packaging ensures that the plant is both elegantly presented and protected against external influences. The packaging made from MM Topliner™ not only convinced the jury of the WorldStar Awards but also the jury at the European Carton Excellence Awards 2021.



**Four wins: The practical stone fruit basket made of Browncolor has won multiple awards in recent years.**



## Multi-award winner

Last year, MM Board & Paper took home a total of seven awards from five competitions for its cartonboard qualities.

### Green Packaging Star Award

in the »Save Food« category for organic tea packaging from dm  
Cartonboard: FOODBOARD™

### Brand Magnet

**Gold** in the »Sustainability« category for stone fruit basket from Hofer  
Cartonboard: Browncolor

**Silver** in the »Impulse at POS« category for packaging of Kellogg's Coco Pops  
Cartonboard: Recycled cartonboard from MM Board & Paper

### German Design Award

**Special Mention** for stone fruit basket from Hofer  
Cartonboard: Browncolor

**Special Mention** for Kellogg's Coco Pops packaging  
Cartonboard: Recycled cartonboard from MM Board & Paper

### European Carton Excellence Award

in the Food & Drink Packaging – Recycled Fibre category for potato box from Hofer  
Cartonboard: Liner from MM Board & Paper

### Art of Packaging Award

Internal gift box MM Kwidzyn  
MM Qualities: ALASKA® WHITE and IPACK™ ESSENTIAL kraft paper

**Do you want to know more about the awards and the products behind them?**

Follow the QR code





With the Kwidzyn board and paper mill acquisition, MM has gained two new core products, uncoated fine paper and packaging kraft paper, in addition to the improved position in virgin fibre cartonboard.

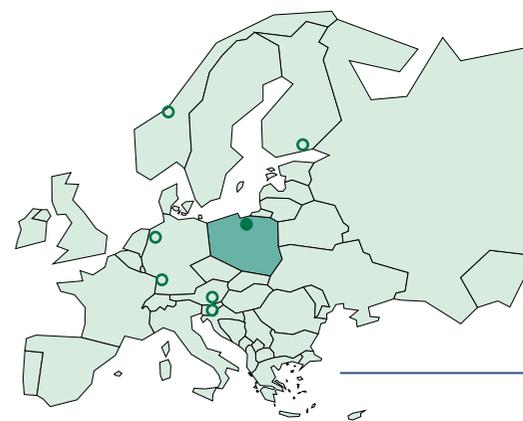
# Paper professional with regional power

The Kwidzyn mill has been part of the MM Group since August 2021. With the Kwidzyn acquisition, we are opening up two important new core businesses with uncoated fine paper and packaging kraft paper in addition to virgin fibre cartonboard.

Anyone who regularly prints out text and images or leafs through a magazine has very likely held a piece of paper by MM Kwidzyn in their hands. Our Polish mill is one of the largest production facilities for high-quality office paper and offset paper in Europe. Five small format cutters and two offset large format cutters cut the smooth, uncoated fine paper into almost any format – from the usual A4 to large sheets for machine printing applications.



## MM Kwidzyn



### Introducing MM Kwidzyn

**Country:** Poland

**Founded:** 1972, part of MM since 2021

**Employees:** 1,650

**Capacity per year\*:**

**265,000 t**

Virgin fibre cartonboard

**390,000 t**

Uncoated fine paper

**80,000 t**

Packaging kraft paper

#### Core products:

- Virgin fibre cartonboard
- Uncoated fine paper
- Packaging kraft paper (Brand: IPACK™)

\* As of 1 April 2023

**INTEGRATED MILL** In addition, the integrated pulp and paper mill with two fibre lines and four paper production lines also produces robust packaging kraft paper (Brand: IPACK™). As demand for plastic-free packaging products increases, virgin fibre board, which is primarily used for pharmaceutical and luxury packaging in the beauty and self-care sectors provides the solution.

**GOOD NEIGHBOUR TO THE LOCAL COMMUNITY** MM Kwidzyn mill is one of the largest regional employers and a close partner for the local community. For example, the company's own power plant supplies the population with district heating, over 60 percent of which comes

from renewable sources. In addition, the in-house wastewater treatment plant not only reprocesses production wastewater but also municipal sewage.

**CHARITABLE PURPOSES** With the MM Kwidzyn Charity Foundation established in 1994, MM also fulfills its social responsibilities and supports those in need. The charitable organisation, which is run entirely by volunteers from the mill, supports local hospitals, orphanages, institutions for the disabled and people in need. The foundation's activities serve as a role model and encourage employees to get involved in voluntary work themselves. The foundation is financed by the voluntary donations of the mill employees and the matching donation by the employer – MM Kwidzyn. Since its establishment around 5 million euros have already been donated. ▴

## Did you know that ...

the paper on which the Polish edition of »Harry Potter« by J. K. Rowling was printed was produced at MM Kwidzyn.

Responsibility is one of the core values of MM Kotkamills: The development of an ecologically sustainable corporate culture is based on cooperation with close partners.

# Thinking and acting in cycles

»Accelerating Circularity« is the motto of MM Kotkamills. Like all MM mills, our mill in Southern Finland is dedicated to the circular economy concept.

Since 2018, the World Happiness Report has ranked Finland as the happiest country for six years in a row. This may be due to having access to nature at their doorsteps and regular walks through vast woodlands. It may also be due to the fact that the Scandinavian country is a European pioneer in terms of ecological sustainability. The Finns are true role models when it comes to recycling: around 70 percent of all packaging is already being recycled. (source: Eurostat)

## INTELLIGENT CARTONBOARD QUALITIES

MM Kotkamills is one of our two youngest MM mills and at the same time also the oldest. The mill has used wood as a raw material for 150 years to produce more sustainable products.



**96 %**  
recovery rate

At MM Kotkamills, waste and side streams are recycled as far as possible. This includes bark (around 10%) for heating purposes or sewage sludge for soil improvement by partner companies.

In many cases, the high-quality virgin fibre cartonboard qualities can make plastic coatings redundant. With its water-based barrier, a drinking cup made from our ISLA® cupstock brand, is industrially compostable.

## RECYCLE INSTEAD OF THROWING AWAY

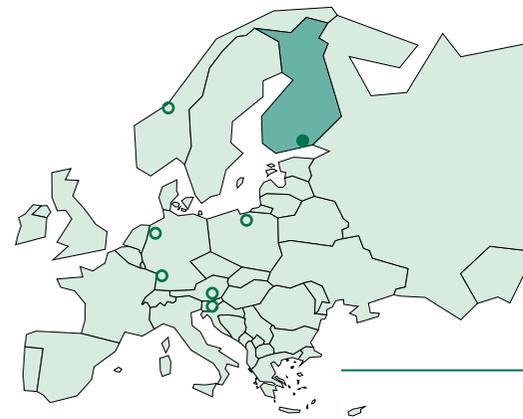
Thinking in cycles is an integral part of all production processes at MM Kotkamills. The mill relies on an integrative business model that is geared towards returning as many raw materials as possible to the production cycle. In order to further increase the amount, investments were



recently made in two cross cutters with automated core and waste handling. These enable the mill to easily recycle the cartonboard broke from cutting back into the manufacturing process. It will start operations at the beginning of 2024.

**PAPER TO STEP ON** In addition to virgin fibre cartonboard, MM Kotkamills also specialises in saturating kraft paper (more about our products on page 10). The mill is considered the world market leader in the production of this special material, which is used in laminate flooring, wall panels and furniture, for example. Here, too, everything goes in circles: The sawdust raw material for the saturating kraft paper Absorbex® comes from the company's own sawmill, from other Nordic sawmills or from recycled fibres, some of which consist of paper cups produced from ISLA® cupstock and collected by the Kotka population in cafés or restaurants. ▴

## MM Kotkamills



### Introducing MM Kotkamills

**Country:** Finland

**Founded:** Sawmill established in 1872, part of MM since 2021

**Employees:** approximately 500

**Capacity per year\*:**

**400,000 t**

Virgin fibre cartonboard, barrier board, cupstock

**185,000 t**

Saturating kraft paper

**210,000 m<sup>3</sup>** Sawn timber

#### Core products:

- Virgin fibre cartonboard
- Barrier board
- Cupstock (Brand: ISLA®),
- Saturating kraft paper (Brand: Absorbex®)
- Sawn timber

\* As of 1 April 2023

## Did you know that ...?

More than half of Kotka City area, located on the southern coast of Finland, lies in the water. Nestled in the Baltic Sea, the city comprises 400 offshore islands, many of which are uninhabited. Ferries run to the largest ones, which many Finns use to get to their summer homes. MM Kotkamills' mill site is on Kotkansaari island and is also surrounded both by the city and the sea.



The environment also benefits from the conversion of the board machine: A new curtain sizer enables CO<sub>2</sub>-friendly drying due to a higher starch content.

# The cartonboard all-rounder

In MM Kolicevo, we produce with maximum flexibility: Depending on your needs, we offer virgin fibre cartonboard, recycled cartonboard or white top coated recycled liner.

**P**ulp has been processed to make paper and cartonboard in northern Slovenia for more than 100 years. When the mill in the small suburb of Kolicevo, roughly 15 kilometres north of the capital Ljubljana, commenced operations, it primarily specialised in paper for letterpress printing. Today, the mill produces a wide variety of cartonboard qualities, primarily for the food and pharmaceutical industries. In addition to Neuss (see page 28), Kolicevo is the second mill at which MM produces high-quality white top coated recycled liner.

## **A CLOSE EYE ON PACKAGING TRENDS**

The Kolicevo mill has demonstrated its expertise especially when it comes to new cartonboard trends, thanks to its decades of expertise and transforms this into innovative packaging solutions: The Slovenian mill produces ALASKA® ECO, a virgin fibre cartonboard which contains high-quality recycled fibres, effectively combining the advantages of a virgin fibre grade (high brightness and smoothness) with those of a recycled grade (optimised resource utilisation). In addition, several years back, MM Kolicevo recognised the high demand for brown cartonboard qualities that give packaging a natural look.

## Did you know that ...?

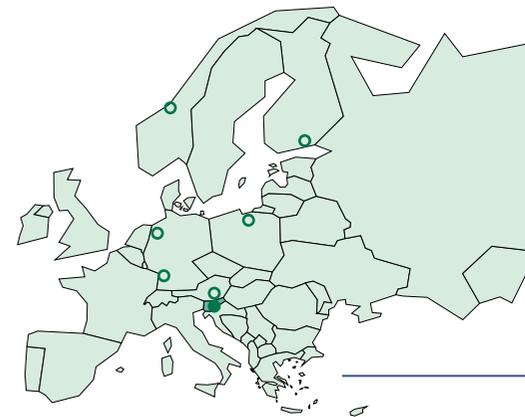
Kolicevo is not only the centre of paper and cartonboard production but has also been home to numerous honey bees for more than 230 years. These include the Carinthian bee (*Apis mellifera carnica*), a particularly productive species that contributes to the preservation of regional plant diversity, such as the Krainer lavender, and to food production as a result of its active pollination. To draw attention to their important ecological function and to protect bees, 20 May was proclaimed World Bee Day in 2017 at the suggestion of Slovenia.



**Maximum flexibility thanks to swing mode:**  
Depending on the demand, virgin fibre board, recycled board or liner are being produced.

With Browncolor (which also adorns the cover of this issue), the mill now offers a kraft recycled cartonboard that impresses with its natural brown colour and good printing properties.

**FLEXIBLE PRODUCTION** The BM3, a board machine operated in swing mode, enables rapid and highly flexible responses to trends at the strategically well-located site between Eastern, Western and Southern Europe: Depending on demand, production can switch instantly from recycled cartonboard to virgin fibre board or liner. Once the mill's planned conversion has been completed in September, even more cartonboard will run the production line from the innovative machine in a resource-efficient manner and with improved quality. ▾



### Introducing MM Kolicevo

**Country:** Slovenia

**Founded:** 1920, part of MM since 1998

**Employees:** approximately 330

**Capacity per year\*:**

**225,000 t**

**Core products:**

- Virgin fibre cartonboard
- Recycled cartonboard
- White top coated recycled liner

\* As of 1 April 2023

# »Saving CO<sub>2</sub> without sacrificing quality«

»The conversion at the three mills is a clear commitment to our locations and to sustainability,« says Tomi Lonka, CTO of MM Board & Paper. In the interview, he talks about the latest investments, how they benefit the environment and what further steps are planned.

## **Mr. Lonka, Frohnleiten, Neuss and Kolicovo are being converted in 2023. Why?**

**TOMI LONKA:** Because the associated increase in our capacities will make us more competitive and sustainable. In addition, there is also a trend towards larger mills and we want to support our customers' growth through more sustainable packaging. In Frohnleiten, for example, we now have around 35,000 tonnes/year more capacity for WLC. After all conversions, totalling more than 100,000 tonnes/year.

## **To what extent does this make production more sustainable?**

Higher capacities mean lower specific resource input. As a result, the machines at all three locations consume proportionally less energy. In addition to performance, all of the projects mentioned place a major focus on the properties of the cartonboard in order to save fibres and, indirectly, CO<sub>2</sub> without sacrificing quality while even improving it.

We also utilise energy audits at all of our locations to continuously determine our savings potential. Photovoltaic systems will soon be installed in Frohnleiten, Kolicovo, Gernsbach and Kwidzyn, which will make a contribution corresponding to roughly the energy consumption of 3,400 single-family homes.



## **About**

**Tomi Lonka** has been CTO since April 2023 and prior to that Project Director of MM Board & Paper. Born in Finland, he has worked in the packaging, paper & pulp industry for more than 20 years, holding positions in Austria, China, Singapore, Slovakia, South Africa and elsewhere relating to investments, operations & operational excellence.

## **Is MM's Multi-Mill concept also improving?**

Yes, it is being developed because the locations are better positioned and, for example, in the event of a failure, we can efficiently produce and deliver a customer's cartonboard elsewhere.

## **Are any further investments planned in the near future?**

We are constantly reviewing our locations and are currently implementing projects worth approximately 300 million euros. In MM Kotkamills, for example, we are currently constructing a sheeting centre which will enable us to offer sheeted products as well as reels of virgin fibre cartonboard in the future. Up until now, we have worked with external cutting operations. However, in future a large proportion will be finished internally. We can also reuse the cutting waste ourselves as part of our circular economy and make cartonboard out of it again. ▴

# The cradle of the cartonboard

The journey of many cartonboard and paper products starts with mechanical pulp that we also produce in Follafoss, Norway.



Every cartonboard and every sheet of paper that we hold in our hands comes from the natural raw material wood. There is enough in Norway: Around one third of the Scandinavian country is covered by forest. Today, the areas contain around twice as much wood as they did one hundred years ago. This is thanks to the basic idea of sustainable management, which the Norwegian forestry also follows: only use the resources which can grow back in the same amount of time.

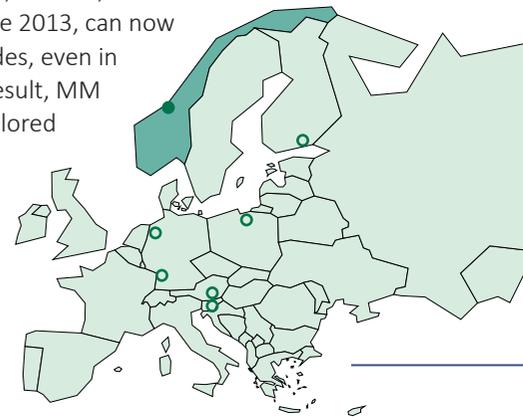
**FROM SAWMILL TO PULP MILL** As a result, the forest on the hills around the small village of Follafoss, nestled in the Trondheim Fjord on Norway's west coast, has remained unchanged over the centuries. In the early 20<sup>th</sup> century, the community began mechanically processing its sustainable raw material to make mechanical pulp, the feedstock for high-quality fibre-based products.

**PIONEERS AT WORK** However, not all mechanical pulp is the same: its properties vary depending on the manufacturing process used. Mechanical pulp obtained by grinding round wood is not very stable in paper, for example, and the paper yellows quickly. That is why it is primarily used for temporary products such as newspapers.

However, in 1984, FollaCell invested in the world's first peroxide bleaching plant, which is capable of producing unbleached mechanical pulp (CTMP) and bleached mechanical pulp (BCTMP) from steamed wood chips in a two-stage chemo-thermal process. This was a true pioneering achievement by the Norwegians because the properties of the material, which has since been obtained from spruce chips and logs, are

Located in the middle of the Trondheim Fjord, the Norwegian MM mechanical pulp mill in Follafoss is one of the largest employers in the region.

similar to more expensive cellulose. MM FollaCell mechanical pulp impresses with a high degree of purity, low shive content, a high proportion of long fibre content and a low proportion of fines level. Paper made using this pulp becomes much whiter and more tear-resistant. The considerable absorbency also makes it suitable for hygiene products such as handkerchiefs or diapers. To meet the customer needs, the mill, which has belonged to MM since 2013, can now offer a wide range of grades, even in smaller quantities. As a result, MM FollaCell can also offer tailored solutions in cooperation with the customer. ▸



## Introducing MM FollaCell

**Country:** Norway

**Founded:** 1919, part of MM since 2013

**Employees:** 60

**Capacity per year\*:**

**140,000 t**

**Core product:**

- Mechanical pulp – with unbleached (CTMP) and bleached (BCTMP) variants

\* As of 1 April 2023



# The specialist for recycled cartonboard

Our MM Frohnleiten mill has the highest production capacity in the European cartonboard industry. Here, we produce a wide range of recycled cartonboard qualities – recently with a completely renewed board machine.

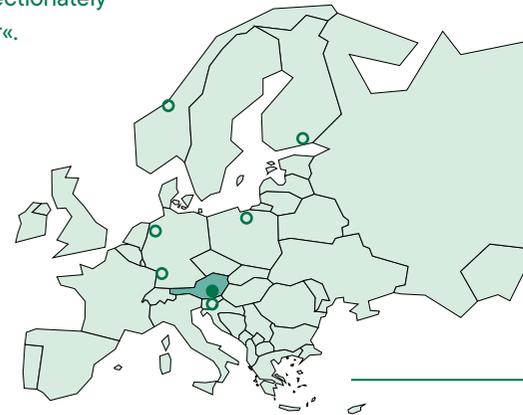
**B**M3 is running again. In record time, the board machine in MM Frohnleiten was put back into operation in mid-March 2023 after several weeks of conversion. MM has invested more than 100 million euros in the comprehensive modernisation at the site. The modernisation focused on improved waste paper processing, better energy efficiency and new production technologies with the aim of further increasing product quality and accelerating the material flow through automated and digital logistics processes. This enables us to even better serve the increasing demand for more sustainable packaging solutions.

The comprehensive investment programme in MM Frohnleiten also includes the conversion of board machine 3 to enable even faster, higher-quality and more energy-efficient production.



## Did you know that ...?

MM Frohnleiten was awarded the Styrian coat of arms (a white panther on a green background) and the board machine 2 is affectionately called »Styrian Panther«.



**LARGEST R&D CENTRE IN CARTONBOARD INDUSTRY** Our Styrian mill is also home to the world's largest research & development centre in the cartonboard industry, which specialises in research and development, analytical chemistry, as well as product safety and compliance. Here we take up subjects such as the use of alternative fibre materials, the optimisation of cartonboard properties and the improvement of processability. In research and development, special attention is paid to polymer chemistry and its analytical methods for modifying fibres and the development of functional surfaces.

**BARRIERS THAT LAST** MM proved that Styria is a good soil for innovation with the cartonboard quality FOODBOARD™, with which MM achieved a breakthrough several years ago: The cartonboard was developed in-house and features an innovative barrier which reliably prevents unintended substances such as mineral oils from migrating into packaged products like cereals, rice or tea. In addition to protection against migration, FOODBOARD™ offers also a particularly good aroma impermeability. In the case of tea, the recycled cartonboard quality preserves the original taste and aroma, eliminating the need for cellophane outer packaging. ▶

## Introducing MM Frohnleiten

**Country:** Austria

**Founded:** 1888, cartonboard production since 1913

**Employees:** 580

**Capacity per year\*:**

570,000 t

**Core product:**

• Recycled cartonboard

\* After the conversion as of 2024



In 2020, MM Board & Paper invested extensively in the Black Forest site. Located in the centre of the city, MM Gernsbach is a major employer and offers extensive training and career opportunities.

# The masters on the Murg

In MM Gernsbach we produce high-quality recycled cartonboard in the heart of the German paper industry.

One of our two German mills is located in the district of Obertsrot, directly on the Murg, the river that runs through the town of Gernsbach. Taken over by MM in 2001, MM Gernsbach in the Black Forest is one of the most efficient recycled cartonboard mills in Europe. Cartonboard production has doubled to approximately 280,000 tonnes per year.

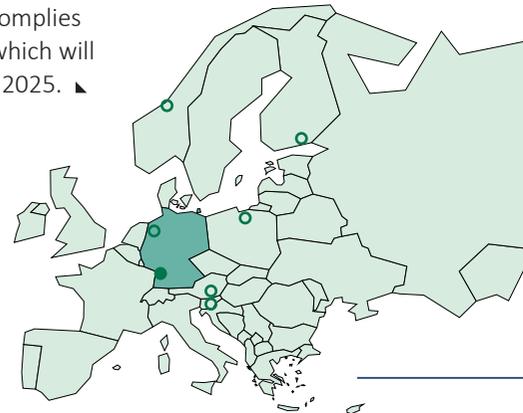
## Did you know that ...?

With the »Paper Centre«, the town of Gernsbach also has its own training centre, whose graduates are still referred to today as »Gernsbach Masters«. This reflects the unique quality of the paper specialist training provided there.

**HIGH BRIGHTNESS** This includes the newly developed MM GT White, one of the highest quality recycled cartonboards ever produced: It impresses with its outstanding degree of brightness and is, therefore, ideal for the high aesthetic demands of packaging for cosmetic and personal care products.

MM GT White PH 0.3 is a quality specifically optimised for the pharmaceutical segment and features optimum laser and inkjet coding properties. In addition, the mill offers MM GD 100, a cartonboard grade made entirely from recycled fibres, which is also available as »FSC® Recycled« (Licence FSC®-C003336).

**INNOVATIVE CALENDER SYSTEM** These products are possible thanks to a recent investment in a new calender, which further improves the surface properties of the cartonboard without compromising their recyclability. Since then, the mill in the Murg Valley has been capable of producing more sustainable cartonboard qualities while also fulfilling the demanding requirements of the cosmetics and pharmaceutical industries. As the result of a further investment in increasing the power plant's energy efficiency, MM Gernsbach already complies with the emission limits which will become mandatory as of 2025. ▾



**More sustainable and tamper-proof printable: MM GT White PH 0.3 was especially developed for the requirements in the pharmaceutical sector.**



### Introducing MM Gernsbach

**Country:** Germany

**Founded:** 1841 as a sawmill, cartonboard production since 1951, part of MM since 2001

**Employees:** 250

**Capacity per year\*:**

**280,000 t**

**Core product:**

- Recycled cartonboard

\* As of 1 April 2023



# A lot of Neuss in the west

Our white top coated recycled liner and recycled cartonboard qualities will soon be produced in MM Neuss even more efficiently.

**I**n our mill in the North Rhine-Westphalian district town of Neuss, we have a high-performance, around five metre wide machine that is one of the most modern of its kind in Europe. On the so-called BM5, we produce primarily white top coated recycled liner for maximum processing performance in corrugated offset and flexo printing, as well as recycled cartonboard.

**GREEN LOAN FOR INVESTMENT** To continue offering such high quality, the board machine is currently being upgraded to a state-of-the-art linerboard machine. To finance the upgrade, MM received the first green classified loan from the German Industrial Bank. Thanks to the installation of a sizer and a curtain coater, the existing liner product range will not only be enhanced with first-class technical specifications and an extended

The central location of the Neuss mill in the densely populated Ruhr area guarantees customers in Central Europe short transport routes as well as fast service and delivery times.



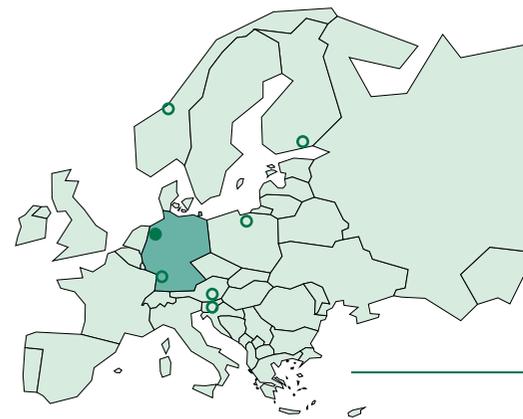
White top coated recycled liner serves as high-quality cover layers for the corrugated board industry and is excellent for printing.

grammage range, it also adds new innovative and more sustainable product solutions. The rewinder installed in parallel is capable of handling the increasing production volume.

**LOCAL PARTNER** MM Neuss also has a state-of-the-art deinking plant that allows optimum secondary fibre colour control resulting in consistent cartonboard surfaces. As a result of its central location near Düsseldorf – the Ruhr district is the most densely populated region in Europe – the mill is a reliable partner for the local authority for the use of collected recycled fibres. ▾

## Did you know that ...?

Neuss is literally just a stone's throw away from Düsseldorf, as it is directly opposite the State capital of North Rhine-Westphalia on the other side of the Rhine.



## Introducing MM Neuss

**Country:** Germany

**Founded:** 1911, part of MM since 1984

**Employees:** More than 500

**Capacity per year\*:**

**385,000 t**

**Core products:**

- White top coated recycled liner
- Recycled cartonboard

\* As of 1 April 2023



# Imagine the packaging of tomorrow today

How do you protect aromatic tea against environmental influences which can alter the flavour? How can cosmetics be packaged in recycled cartonboard without losing their aesthetic appeal? Can sustainable cartonboard barriers replace plastic?

Transforming an idea into a product: The MM innovation team around Christian Neumann, Director Innovation & Product Development, is working closely with Alexey Vishtal, Head of Novel Packaging Development (from left to right).



Hundreds of ideas were submitted to the MM innovation hub »we.invent« since the start.

The innovation team at MM Board & Paper tackle questions like these. In 2021, the company established a new innovation department which advances the development of future fibre-based products, examines the improvement potential of existing product qualities and manages all of the underlying processes.

**A BRILLIANT IDEA** It always starts with an idea, which usually comes from customers: »80 percent of our ongoing innovation projects are based on customer requests,« says Christian

*80 percent of our innovation projects are based on customer requests. Our service unit collaborates to develop the right solutions.*

Neumann, Director Innovation & Product Development. »We see ourselves as a service unit and then collaborate to create a suitable solution.« Our new MM GT White recycled cartonboard is a good example of this: It arose from the increased demand from cosmetics manufacturers who wanted to package their products using recycled cartonboard as well as virgin fibre board – without having to forego a high-quality, functional white surface.

**CHALLENGING THINK TANK** Overall, hundreds of ideas have already reached MM's new »we.invent« innovation hub. Each one is carefully evaluated and the most promising ideas are then examined and tested to determine their product requirements. In the case of the new recycled grade MM GT White, a high market potential was identified together with Sales. The technology department confirmed that production can be carried out readily using the existing production lines and the technical product service also approved of the processing idea. After presentation to the internal steering and decision-making committee, the green light was given for the start of product development.





**What can be done even better? The innovation team also focuses on details.**

► **FROM KICK-OFF TO TOUCHDOWN** Once the right fibres have been selected and the production processes optimised, the finished product then undergoes thorough internal and external testing. Once the new or enhanced products pass these stringent tests, they are ready for market launch.

## What do disruptive and incremental innovation mean?

In addition to advancing the development and optimisation of existing products (incremental), MM is also constantly researching new, innovative products as a means of entering into new markets (disruptive), for example. »We always take both paths because incremental innovation often paves the way for the emergence of disruptive products.« explains Christian Neumann.

For use in the cosmetics sector, MM GT White has to have an excellent white appearance on the top and reverse sides, be suitable for various finishing techniques, reverse printing and high-speed processing by our customers.

The pharmaceutical sector is even more demanding: There, it is important that Braille (Braille embossing) and the legally prescribed code for the anti-counterfeiting of medicines can be applied safely and in compliance with standards. MM GT White PH 0.3 was specifically developed for this purpose and possesses optimum inkjet and laser coding properties. »The ink has to dry on the cartonboard within 0.3 seconds, otherwise there is a risk that the sensitive code will be smudged and the pack cannot be sold,« explains Neumann.

Barrier cartonboard such as FOODBOARD™, which provides reliable protection against environmental influences, underwent extensive long-term tests before being launched.



Before cartonboard is approved for packaging food, it has to withstand extensive testing.

**GOODBYE PLASTIC?** One question remains unanswered: Can sustainable cartonboard barriers replace the use of plastics as packaging material?

MM Board & Paper is constantly working on innovative barrier concepts to reduce plastic usage and enable cartonboard and paper to be employed as an alternative packaging material for a wide range of food products. In addition to barriers that are already available, we are also focusing on promising organic-based and compostable barriers. The innovation centre will continue its intense work in 2023. ▶



### Become part of our innovation hub!

Do you want to work with us on the fibre-based products of the future or do you have an interesting idea to advance an existing product to meet your needs?

Then contact us at [we.invent@mm.group](mailto:we.invent@mm.group) or scan the QR code. ▶



## From the idea to the launch

Currently more than 20 innovation projects are in progress at MM. They all go through the same four-step process.

### 1 Brainstorming by our customers, employees & trend research

More than 700 ideas have already been submitted to the MM's platform »we.invent« in its first year. 400 of these focus on concrete product ideas.

### 2 Evaluation Evaluate and approve ideas

The ideas generated are evaluated using feasibility and economic viability tests. Around 20 products are currently in development.

### 3 Development

The product is not ready for launch until the technical product development has been completed and the product has undergone extensive testing.

### 4 Launch

The product is now ready for its launch. Marketing and Sales handle the promotion.

# How much CO<sub>2</sub> does my packaging contain?

How MM Board & Paper prepares life cycle assessments for its customers' folding cartons.

**W**ood passes through a complex production process before it is transformed into cartonboard and then into packaging. Energy and raw materials are consumed in the process and waste is sometimes produced. All of this has an impact on the CO<sub>2</sub> footprint.

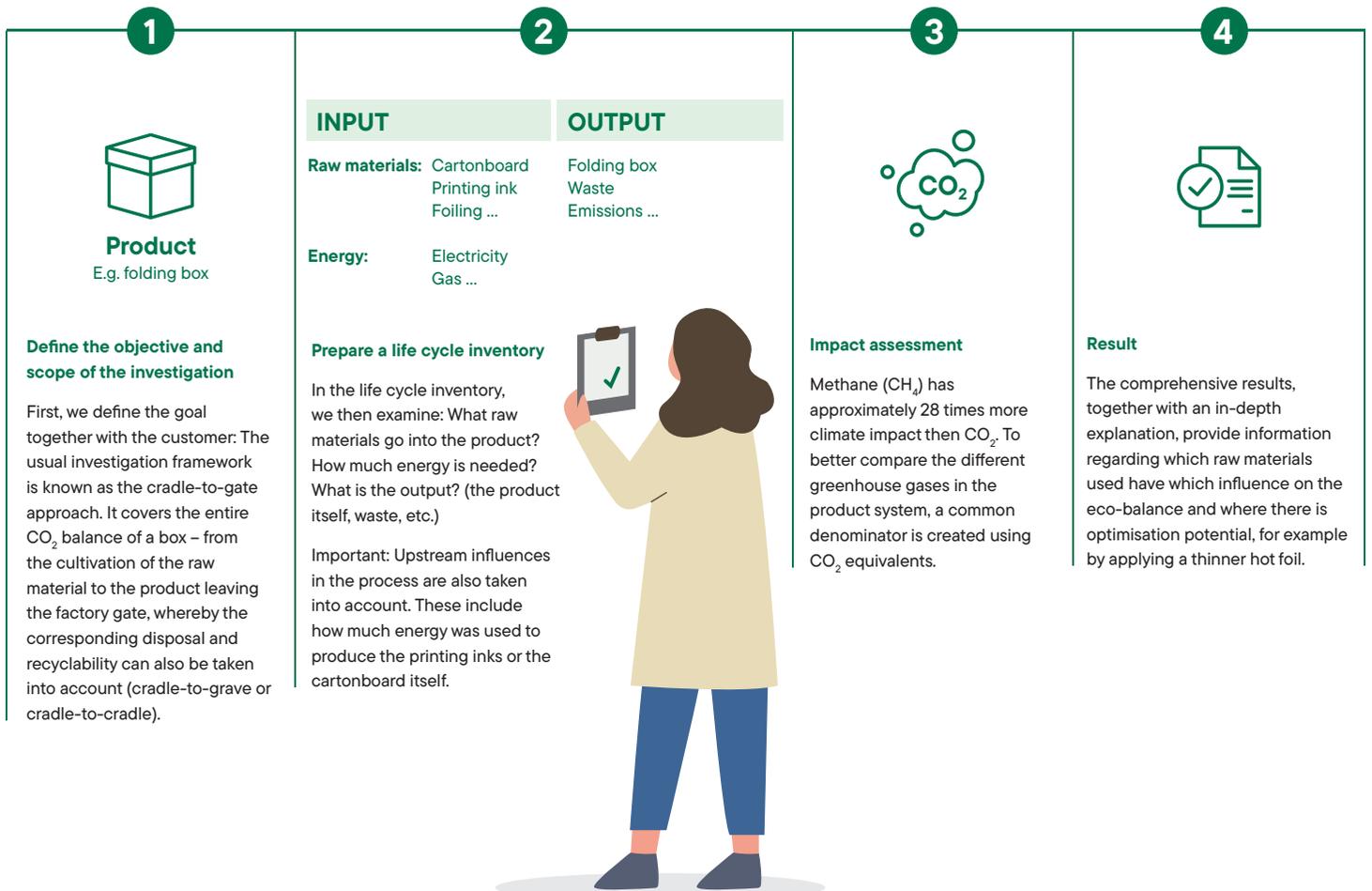
The life cycle assessment enables MM Board & Paper to provide its customers with transparency regarding the footprint of the respective packaging – throughout the entire life cycle. Explained in four simple steps.



Are you interested in a life cycle assessment for your packaging?

**Nicole Heimhilcher**, Product Sustainability Expert at MM, will be happy to advise you.

► [nicole.heimhilcher@mm.group](mailto:nicole.heimhilcher@mm.group)





**For  
takeaway  
please.**

**BROWNCOLOR – UT4**

215 gsm

from MM Kolicovo, Slovenia

talent for more sustainable food service packaging