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Steve Binnie
Chief Executive Officer,
Sappi Limited

To Make Sustainability a Success, We Have to Involve Our People

he rapidly changing world around us is having a widespread impact on just about everything: global economies, industries, markets, consumer trends and our planet's resources. As a company, we are embracing this reality with a focused strategy and some very clear objectives.

Our way of living, and ultimately Sappi's future, is being impacted by a number of megatrends, including shifts in demographics, technology, climate, the drivers of the global economy, as well as the reality of adjusting to a carbon constrained future. As a company we understand these changes and are embracing them by adapting our business accordingly. Our ultimate goal, within a changing world, is to maintain our position as a global forest products leader. We will achieve this through the power of One Sappi - committed to collaborating and partnering with stakeholders - always focused on being a trusted and sustainable organisation with an exciting future in woodfibre.

The quality of our people, their dedication, resourcefulness and drive has made it possible to overcome the transformative challenges in our industry. Today, we are in a much stronger position to move ahead, thanks to our optimism and pragmatic approach in running a leaner, more productive and efficient business.

We now have the opportunity to further transform and diversify as a business.

To do this, we have identified numerous exciting prospects for which we are uniquely positioned to take a lead industry role. As a natural renewable resource company, Sappi is in an excellent position to help drive the renewal of the forestry industry towards a low-carbon future. We will make full use of this opportunity.

Our approach is encapsulated in our 2020Vision. Within the next five years, we want to maximise the returns from our mature businesses, expand our existing high-growth businesses and enter new businesses in adjacent fields as we unlock and commercialise the potential of plantation and forest-derived bio-products.

The fact that we operate in a carbonconstrained world as a natural renewable resource company has opened up many exciting opportunities to expand and diversify. Our business is based on woodfibre derived from trees – and it is in these fibres that we have found the key to unlock our sustainable future in a fast-changing world.

Finally, how we reach our strategic goals as a business is as important as reaching those goals. Our new group value statement defines our operating ethos going forward – "At Sappi we do business with integrity and courage, making smart decisions which we execute with speed."

Sustainability at Sappi – Everyday and Every Shift

e believe that if we want to make sustainability a success, then we have to involve our people. At Sappi, we are serious about sustainability, and we are serious about collective responsibility.

We have chosen to be ecoeffective, integrating the way we do business with our approach to the environment. This means we are effective in an efficient way, reaching our goals and objectives with optimised impact.

Eco-effectiveness is a hands-on approach to sustainability involving everyone throughout the company. Every little change or improvement can make a difference – from reducing water usage and making effective transport decisions to alternating energy sources. It also extends to our customers. supporting and encouraging their eco-effective choices. Ecoeffectiveness is based on a holistic view of People, Planet and Prosperity (the 3Ps). These values and commitments underpin everything we do, from our business decisions and processes to our dealings with stakeholders and customers.

Charter Commitments

Sappi's Charter Commitments outline the way Sappi Europe wants to do business, our targets and results. They provide clear guidance to all our staff, suppliers and shareholders on how the company will behave and how we believe it must operate. They are used as tools to help us establish benchmarks, measure our progress and implement action plans

Prosperity

Generating prosperity as our ability to remain a sustainable player is founded on generating profits in the short and long term.

- Focusing on long-term profitable growth
- Driving customer satisfaction through technology and innovation
- Building on our competitive position in our core markets
- Maintaining our licence to trade
- Promoting an ethical business culture
- Creating value for all stakeholders

People

Improving the lives of people through products that enrich their lives and by providing an environment in which they can develop their full potential.

- Cultivating an inclusive, diverse workplace
- Being a great place to work
- Providing training and development opportunitiesPrioritising wellbeing, safety
- and health
- Partnering with communities
- Engaging with stakeholders openly and constructively

Planet

Treading more lightly on the planet by balancing our needs with our impact on Planet Earth.

- Reducing greenhouse gas emissions and increasing our use of renewable energy
- Safeguarding biodiversity by promoting sustainable forestry



- Supporting sustainable forestry by purchasing wood and pulp only from certified or risk assessed sources
- Reducing solid waste and improving water quality
- Conforming with best environmental practice and legislation

About this Report

This report covers the period from the beginning of October 2014 to the end of September 2015. In 2014, Sappi Europe published a 'Sustainability Factsheet'. This report includes a review of the company's 2017 Sustainability Targets and 2015 KPIs (Key Performance Indicators). Looking towards the future, Sappi Europe's 2020 Sustainability Targets will include a reduction of specific CO₂ by more than 5%, and a maintained 70% target for certified fibre (of input into our products).

Sappi reports on a regional and global basis. Our regional reporting structure allows a deeper regional focus that reflects local markets and aspects. Safety, health, quality and environmental data is compiled according to international best practice. Commentary is provided on graphs to enhance understanding and specific measurement criteria – as well as instances where these have changed – are clearly spelled out.

Our sustainability reports, covering prior financial years, are available at www.sappi.com.

Reporting Framework

Sappi Europe has been publicly reporting progress on sustainability initiatives since 2008 as part of a global sustainability report issued annually by Sappi Limited after the financial year-end. Our financial year starts on 1 October and ends on 30 September of the following year.

Since 2011, each regional division has issued its own sustainability report with consolidated global sustainability performance included in the annual report to shareholders. Sappi Limited will also continue to publish a separate online report in conformance with the Global Reporting Initiative framework and disclosing compliance with the UN Global Compact, to which we are a signatory.

Emission figures are based on our mills in Europe unless specified otherwise. All production and non-production activities on our mill premises are included. People and prosperity metrics are reported for the full region, including central facilities and sales offices.

Our Products

Publication Papers

Sappi's portfolio of coated paper for web-offset printing serves the high volume printing market. End uses include weekly magazines, quality consumer magazines, catalogues and marketing materials.

sappi Galerie

sappi Royal

Commercial Print

Sappi's portfolio of coated and uncoated fine paper is available in sheeted format for sheet-fed offset and digital printing. Typical end users are small- to medium-volume producers of high-quality brochures, catalogues, corporate reports & accounts, direct mail, calendars, books and magazines.

sappi Magno

sappi GalerieArt

sappi Quatro

sappi Vantage

Speciality Papers and Boards

Sappi's Speciality papers and boards offer innovative products and solutions to meet the requirements of packaging converters, brand owners, designers and print finishers in the area of Flexible Packaging, Labels, Containerboard, Rigid Packaging, Technical Papers and Release Liners.

ALGRO Design

ALGRO Guard M

atelier



Release Paper

Release paper is used as a mould to put texture on other surfaces, ranging from manmade wood and leather to engineered films and rubber. Release paper is used to manufacture products that surround us in our everyday lives from sports gear, shoes and handbags, sofas and chairs, laminate flooring, work surfaces and waterproof clothing, to aircraft and car interiors.

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Our European Presence

appi Europe is the leading producer of coated fine paper used in premium magazines, catalogues, books, and high-end print advertising. Alongside Graphics papers, Sappi Europe offers coated and uncoated Speciality paper used in the area of Flexible Packaging, Labels, Containerboard, Rigid Packaging, Technical Papers and Release Liners. Headquartered in Brussels, Belgium, Sappi Europe is recognised for innovation and quality.

Sappi papers are produced in our Europe mills, all of which have ISO 9001, ISO 14001, ISO 50001 and OHSAS 18001 certification and EMAS registration.

Sappi Europe's mills hold chain of custody certification under the Forest Stewardship Council (FSC®) and/or the Programme for the Endorsement of Forest Certification (PEFC™) Schemes.

Sappi Europe is a division of Sappi Limited (JSE), a global company headquartered in Johannesburg, South Africa, with 12,500 employees worldwide and manufacturing operations in seven countries on three continents, sales offices in 24 countries, and customers in more than 160 countries around the world.

Learn more about Sappi at www.sappi.com

DID YOU KNOW?

Sappi Europe was the first company to achieve multisite cross border FSC®/PEFC™ certification.

Our Alfeld Mill was the first mill ever to switch to 100% TCF (Totally chlorine free pulp bleaching).

As a major paper manufacturer, Sappi Europe is the only company that has ISO 9001, ISO 14001, ISO 50001, EMAS and OHSAS 18001 for all of its production sites.

> Brussels, Head Office

Lanaken Mill

Belgium

Products: Coated mechanical paper and coated woodfree paper

Paper capacity: **510**Paper pulp capacity: **170**Employees: **520**

Certificates: ISO 9001, ISO 14001, ISO 50001, EMAS, OHSAS 18001, PEFC™ CoC, FSC® CoC,

FSC® CW

Maastricht Mill

The Netherlands

Products: Coated woodfree paper

Paper capacity: **280**Paper pulp capacity: Employees: **440**

Certificates: ISO 9001, ISO 14001, ISO 50001, EMAS, OHSAS 18001, PEFC $^{\text{\tiny{TM}}}$ CoC, FSC $^{\text{\tiny{SO}}}$ CoC,

FSC® CW

Kirkniemi Mill

Finland

Products: Coated mechanical paper

Paper capacity: **760**Paper pulp capacity: **330**Employees: **550**

Certificates: ISO 9001, ISO 14001, ISO 50001, EMAS, OHSAS 18001, PEFC™ CoC, FSC® CoC, FSC® CW

Alfeld Mill

Germany

Products: Coated and uncoated Speciality paper

Paper capacity: 270
Paper pulp capacity: 120
Employees: 750

Certificates: ISO 9001, ISO 14001, ISO 50001, EMAS, OHSAS 18001, PEFC™ CoC, FSC® CoC, FSC® CW, ISO 22000, DIN EN 15593

Stockstadt Mill

Germany
Products: Coated and uncoated
woodfree paper

Paper capacity: 445
Paper pulp capacity: 160
Employees: 730

Certificates: ISO 9001, ISO 14001, ISO 50001, EMAS, OHSAS 18001, PEFC™ CoC, FSC® CoC,

Sappi Europe

49%

of group sales

7

Paper mills

16

Sales offices

Customers in over

100 countries

5.100 :::

employees in Europe

3.5 million

annual paper production capicity in Europe (5.6 million worldwide)

1.2 million

annual pulp production capacity in Europe (2.8 million worldwide)

Ehingen Mill Germany

Germany

Products: Coated woodfree paper

Paper capacity: 275
Paper pulp capacity: 140
Employees: 520

Certificates: ISO 9001, ISO 14001, ISO 50001, EMAS, OHSAS 18001, PEFC™ CoC, FSC® CoC, FSC® CW

Gratkorn Mill

Austria

Products: **Coated woodfree paper**Paper capacity: **1,000**

Paper pulp capacity: **250** Employees: **1,250**

Certificates: ISO 9001, ISO 14001, ISO 50001, EMAS, OHSAS 18001, PEFC $^{\rm m}$ CoC, FSC $^{\rm o}$ CoC, FSC $^{\rm o}$ CW

Paper: Paper capacity (tonnes per year)
Pulp: Pulp capacity (tonnes per year)

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"We know that the foundation of our industry is inherently sustainable, but we still need to reduce our emissions" **Berry Wiersum** Chief Executive Officer, Sappi Europe

Investing in Our Sustainable Future

Building and maintaining a sustainable future for our industry depends on having the right infrastructure in place, as CEO of Sappi Europe, Berry Wiersum is well positioned to know.

he need for the paper is not news to us. The European Pulp and Paper industry recognised this early on and in 2010, CEPI (the Confederation of European Paper Industries) put together its Roadmap 2050 in close cooperation with DG Climate of the European Commission. Sappi is very engaged in this process.

What is clear, is that revolutionary new technology is needed in order to achieve these goals, and in order to incubate or nurture low carbon technologies, the right enabling framework is required. Herein lies the biggest challenge. Lead times are long, the technology is complex and returns are slow. But we are committed. The sustainable future of our industry is our life blood.

Open Innovation and Cooperation

We believe in the power of open innovation and cooperation. The CEPI Two Team Project is exactly the kind of game changer the industry needs. The initiative took the form of a year-long race designed to seek out CO₂ emission cutting technology. The concept itself was proof that the industry is fully capable of innovation. The eight new technologies that resulted from the project are further proof that a combination of cooperation and competition can breed success.

One of the most interesting technologies came from outside the industry, copying what thirsty plants do to obtain water. They produce

Deep Eutectic Solvents to break industry to reduce emissions down part of the plant into cellulose and water. The same approach can be used to make pulp from wood in gently heated autoclaves, thereby removing up to 40% of the energy required to make pulp with conventional technology.

Investing in our future

In a step that supports Sappi Europe's drive for efficiency and profitability, the company has invested over EUR 126 million in its Sappi Gratkorn Mill (Austria) and its Sappi Kirkniemi Mill (Finland). For Gratkorn the EUR 70 million investment focused on upgrading paper pulp production facilities, as well as further improving paper quality to meet current and future customer requirements.

The investment in Kirkniemi Mill, in the order of EUR 56 million revolved around the building of a new power plant on the mill site, supporting the mill's cost competitiveness and future

Since starting up the PM2 in 2014, Sappi Alfeld Mill has already launched four Speciality products. They include a mineral oil barrier paper, a coated paper for flexible packaging, new silicone base papers and a base paper for direct thermal printing. Our specialities business is entering a very exciting space, with Sappi Maastricht Mill now producing atelier™, a new folding box board. Our Sappi Ehingen Mill produces Fusion which is a topliner.

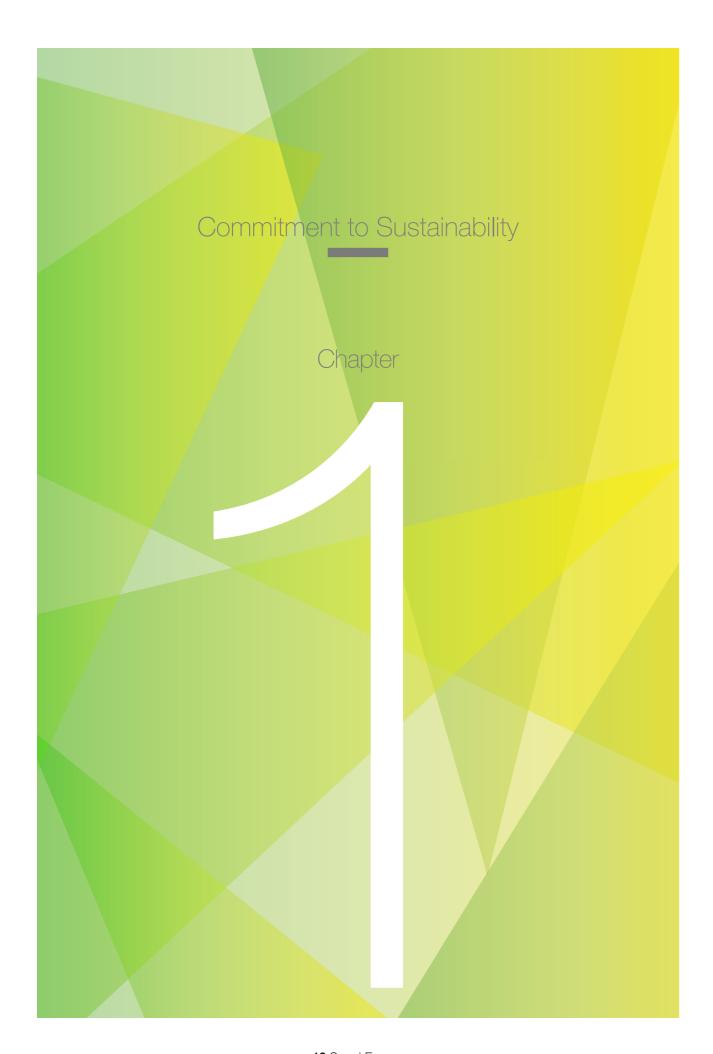
Engagement

But we can't make progress without people. At Sappi Europe, it is everybody's job to think about how to do things better; it's an opportunity to make a difference. We're all in it together, and our future depends on collective thinking and collective action. In 2013, we introduced the Sappi Performance Engine (SPE) with a view to making our organisation focus more holistically and consistently on continuous improvement. The Hoshin Kanri process engages with each and every individual throughout the whole company to ensure that our values are applicable and relevant to everyone's work environment. These processes, as well as the PDCA (Plan Do Check Act) cycle are here to stay, and have placed us in a great position to take on the future.

Eco-effectiveness.

Investing for the future also requires us to take a moment to look at the way we do things. We take an eco-effective approach to sustainability, which revolves around every single person in Sappi taking the time to change or improve the status quo. Again, we view this as an opportunity to make a difference. It also makes sustainability more relevant to each and every one of us.

"At Sappi, we do business with integrity and courage, making smart decisions which we execute with speed." This is our value statement; it's also the pulse of our organisation. It gives us the structure we need to work towards our sustainable future.





Rainer Neumann,

Director Human Resources, Sappi Europe

PEOPLE

Enabling Our People to Grow

t Sappi, we do business with integrity and courage; making smart decisions which we execute with speed. But a simple statement about our values is not enough – they need to be felt and brought to life by our people. One of our key objectives has been to ensure that our values are made relevant to each and every one of our employees. The process has been engaging and fruitful and has given us a firm footing as we head into the future.

Our charter commitment states that we are committed to improving the lives of people through products that enrich their lives and by providing an environment in which they can develop their full potential. This is an absolute priority for us.

Cultivating an Inclusive,
Diverse Workplace
We recognise that diversity
facilitates interaction with different
cultures, colleagues and customers
in an increasingly globalised
marketplace. By creating an
inclusive culture representative of a
diversity of people, thoughts and
ideas, we enhance our ability to
operate in global markets.

Communication and Strategy Initiatives:

- Annual roadshows by the CEO, supported by the respective European functional heads
- Cascading corporate and regional strategy; and ensuring through the Hoshin Kanri deployment process that key business goals, projects and improvement initiatives are linked and followed-through organisation-wide
- Consistently running performance management: in business year (BY) 2014 93% of our eligible staff were included in performance management versus 85.8% in 2013.

Despite greater efforts, the recruitment and retention of women in the workplace remains a challenge. Women have traditionally been under-represented in engineering domains. Bringing female trainees on board has been successful, and we continue to focus on appointing women at management levels.

Sappi has implemented policies to ensure that the workplace is free of discrimination and harassment. Structures and processes are in place to deal with problems should they arise.



John Donners, Communications, Training & Facility Manager, Maastricht Mill and Marjolein Vilé, Corporate Communications Manager, Sappi Europe

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Sappi is dedicated to creating work environments that engage, stimulate and support our employees across all levels.

In summer 2013, Sappi Europe launched the Sappi Performance Engine (SPE). In a nutshell, SPE is a vehicle specifically designed to transform Sappi Europe into an organisation dedicated to Continuous Improvement (CI), where people can unlock their potential.

Our SPE Wheel Incorporates Three Key Focus Areas Which are Interlinked:

- A High Performance Culture, where strategic priorities are broken down into our organisation so that everyone can see how they can contribute to the overall success of our organisation, and a consequent follow-through to ensure that targets set are achieved
- A Continuous Improvement culture and mindset in all we do, where CI/Six Sigma tools are used to unlock improvement potentials
- A Leadership Culture that engages and inspires all our people, and where change is managed and accepted as part of our daily lives.

We have further embedded our Sappi Europe Values by running team workshops across Europe starting with the EMT (European Management Team) and finishing with our shift teams at operational levels.

Sappi Europe's Values

- act with integrity
- be courageous partnership
- execute with speed

The aim was to discuss, align, document and visualise what each of the values mean and to refer back to them as a framework on which to base our daily actions. We will run a similar process in due course in the context of the launch of our new Global values which will supersede our European ones.

Hoshin Kanri has been implemented throughout the organisation. It is a method through which company objectives and priorities are deployed from the European Management Team down into the organisation. It improves horizontal alignment and collaboration across sites and functions. As a result of significant involvement by Sappi people, it has resulted in some great successes.

The use of our four-step PDCA Mindset approach and the subsequent use of PDCA cycles (Plan, Do, Check, Act) as a problem-solving technique has been key to this success.

Providing Training and Development Opportunities

A key component of our Employability Strategy is to ensure that both managers and staff take joint responsibility to nurture employability through personal and professional development. This leads to increased engagement in learning and training opportunities, mobility across jobs, and functional mobility. Fostering a culture of life-long learning supports our strategy.

Universe is a newly launched digital learning platform, the purpose of which is to offer support before, during and after any form of development and learning such as training. By increasing the interactivity between our employees and internal trainers, as well as between participants, the impact of the training can be effectively prolonged.

Designing and investing in effective training is very important for Sappi. Company-wide targets to ensure that employees receive an average of 30 hours of training per year were successfully reached in 2014 but not in 2015.

Our 70:20:10 approach was launched to increase awareness Above: Gratkorn Mill's Charity run in September 2014 Right: Maija Renström, Kirkniemi Mill Laboratory

"We have worked hard to make our values relevant to each and everyone of us within the company"



and importance of learning and development through alternative means rather than formal training. Whilst formal training via classroom structures remains important, it only has 10% impact. The most effective means (70%) is through on-the-job training with specific project assignments, and working in multidisciplinary and/or multinational teams. The manager's coaching role accounts for 20%.

5:0:5 is a tool that is used to support managers and employees in agreeing expectations prior to any training and development initiative. This helps the employee to go through the initiative with full focus, discussing and aligning postintervention on learnings and use of training.

Driving leadership culture within the company has been an ongoing priority. Over the last two years, a practice workshop on "implementing change" was fully rolled out for all managers at all levels. It has been instrumental in helping employees cope better with change.

Sappi has also embraced the concept of coaching and has launched an internally facilitated intervention to support senior line managers in becoming more effective coaches in general, and specifically in supporting their teams to embrace PDCA-thinking. We are very confident that this will help us to further unlock and recognise the potential and ideas of all our workforce across Europe.

Sappi's apprenticeship programme provides more than 220 school leavers with training for

roles such as paper makers, process operators, engineering artisans and business clerks. At management level, Sappi's pan-European two-year graduate trainee programme enables the company to source and grow managerial talent.

Prioritising Wellbeing, Safety and Health

A true health and safety policy evolves constantly. Sappi's safety approach is based on five fundamental principles:

- A zero-injury target
- Integrated health and safety planning and management
- Training at every organisational level
- Participative information and control structures
- Adherence to international best practice and safety standards

Several on-site wellbeing initiatives have been implemented in recent years including:

- Revised shift systems (forwardrotating)
- Preventive measures e.g. health checks, risk screening, increased awareness for stress and burnout symptoms
- Counselling against any form of potential abuse
- Support of various fitness and related activities (e.g. health workshops, lectures)
- Re-integration of absent employees

As well as giving line managers responsibility for employee health management, working area surveys have been conducted in cooperation with external health specialists and relevant stakeholders. The objectives have been as follows:

- Identify employees movements
- Evaluate health risks
- Implement a risk prevention programme
- Evaluate possibilities to construct a healthier work place

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Sappi Europe Safety & Eco-effectiveness Week

Sappi Europe's 2015 Safety Week embraced eco-effectiveness, demonstrating that every initiative helps, no matter how big or small. Here is a glimpse of the different initiatives that took place in our mills and offices across Europe.

Alfeld Mill

0

Alfeld Mill took a deep dive into two of their eco-effective projects, looking at mill water usage and producing electrical power using biofuel, bio gas and bark.

Austria, Overseas and Switzerland

Amongst other activities, both the Solothurn and Viennese Sales Offices chose to raise awareness about alternative transport choices, encouraging colleagues to leave their cars at home.

Central Eastern Europe

The CEE Sales Office encouraged colleagues to learn more about climate change through the Live Earth initiative, and organised a collective walk to get people moving!



Gratkorn Mill

Their eco-effective information corner inspired colleagues to share their ideas.



Inspired by the educational tool, the Polish Sales Office hosted a seminar called "My well-balanced diet" and launched a campaign to promote healthier choices of transport.



Brussels Head Office

The Brussels office focused on food and exercise, hosting an eco-effective picnic to brainstorm ideas, and inviting people to experience Yoga and Tai chi.



Germany

The Hannover Sales Office reduced CO₂ emissions by 205kg simply by encouraging employees to use public transport, car pooling and cycling.

Other initiatives include an annual Global Safety Awareness Day at all our sites, during which we offer various safety, health & wellbeing programmes to help staff to stay in excellent condition both mentally and physically. The programme has been very successful, to the point that it now extends over an entire week.



Lanaken Mill

Lanaken shared eco-effective folders and post-its with staff, and put their own story on display to encourage others to get involved.



As well as hosting an information stand and sharing environmental updates about their new plant, Kirkniemi Mill launched an Eco-Action competition to get staff to share their eco-ideas from both work and home.



Ehingen Mill

Sappi sponsored its employees to cycle to work and 10 students from Kaufmännische Schule, Ehingen, to cycle to school. The money raised was given to the school to buy rain forest certificates for a rainforest that is kept as a nature reserve.

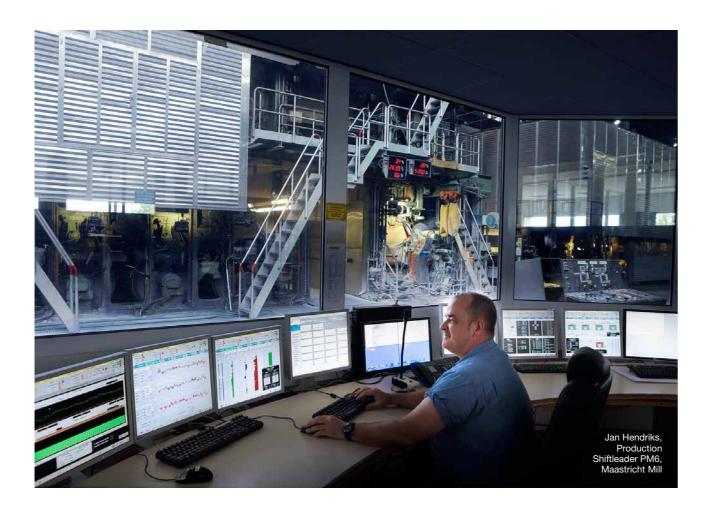


Stockstadt Mill At Stockstadt Mill,

employees were taught how to cut wood safely.

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Lost Time Injury Frequency Rate

Our 2015 target was to reduce the Lost Time Injury Frequency Rate (LTIFR) to 0.8 (this includes central units) and to report occupational injuries better and more comprehensively. We met our target with a LTIFR of 0.76 for our own staff with Alfeld being our best performing mill with a LTIFR of 0.18. We will continue our intensive safety efforts for the entire European operation and provide a safe working place for all our staff.

Engaging with Stakeholders Openly and Constructively

Engaging with our stakeholders is very important. We have a number of structures in place to facilitate interaction. The overall Industrial Relations climate between Sappi Europe and its involved stakeholders (unions, works councils, employees) is constructive and good – bargaining and negotiations take place in good faith overall.

In line with European legislation all employees have freedom of association – the estimated level of association is about 77%. Wage negotiations take place through different platforms depending on the country.

At policy level, Sappi Europe engages with CEPI (The Confederation of European Paper Industries) and BIC (The Bio-Based Industries Consortium) where Mat Quaedvlieg (Manufacturing Director of Sappi Europe) is Vice Chair/Treasurer and an Executive Committee Member. At local level, Sappi Europe companies are also members of national paper industry associations.

Engagement and Staff Retention

The Sappi Group employee engagement survey measures our staff's attitudes at work. It measures the level of sustainable engagement, in particular whether our staff are motivated and enabled to deliver their best performance.

The survey began in September 2015 but its results were not yet available by the time this report went to press.

Sappi needs to keep its best people, and a low staff turnover rate is a clear indicator of whether or not this is happening. In 2015, Sappi's turnover rate was 10.2% per cent, up from 9.6% the year before, although this was primarily due to restructuring activities. The company's voluntary turnover numbers are considerably lower at 2% compared to 2.9% the year before. Sappi's aim is to keep voluntary turnover below 2%.



Charter Commitments: Planel



Jens Kriete, Environmental Manager. Sappi Europe

PLANET

Improving Our Footprint

educing energy and raw material consumption during production of our products is a priority for Sappi Europe. Although we are making progress in reaching our 2017 targets, we must keep focused. Looking towards the future, Sappi Europe's 2020 Sustainability Targets will include a reduction of specific CO₂ by more than 5%, and a maintained 70% target for certified fibre (of input into our products).

Reduction of Specific Water

25.00

20.00

15.00

10.00

At Sappi Europe, water is abundant at the majority of our mill locations with no water shortage risks foreseen. Even in areas of high

Specific Water Use*

Spec. Water 2017 Target

population, water is readily available.

Our water use has an impact on energy consumption. It is heated up during the paper and pulp making process. Similarly, our mills lose energy through their water discharge.

Our 2017 water reduction target is to reduce our specific water usage by 5%. In 2015, our specific use decreased by 3.5%. While some developments worked against this target (such as the change in Alfeld) most of our mills have experienced a gradual decrease in specific water use. The biggest impact resulted from reduced pulp production at Gratkorn Mill due to the rebuild of the liquor line.

Specific CO2**

Spec. CO₂

2017 Target ——

700.00

600.00

500 00

400.00

300.00 -

200.00

Reduction of Specific CO₂**

Sappi Europe's 2017 CO₂ reduction target is the reduction of specific direct fossil CO₂ emissions, including purchased power emissions, by 5%. In 2015, our specific use decreased by 1.5% compared to the reference year (2012), continuing the slightly positive emission reduction trend.

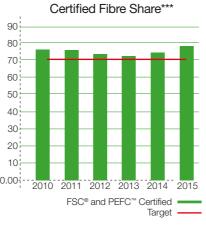
The upgrade of PM2 in Alfeld Mill has resulted in increased specific emissions however progress has been made with reduced emissions compared to 2014. Stockstadt Mill decreased its specific emissions due to increased production and successful improvement measures carried out in its pulp plant, including more efficient liquor evaporation. Maastricht Mill purchased more electrical power instead of using natural gas for onsite power generation. Gratkorn Mill experienced an increase in specific emissions due to the rebuild of the liquor boiler.

Certified Fibre***

Since 2009, we have successfully reached our 2017 target of 70% certified fibre share.

our wood suppliers, and all of our and PEFC™ certification schemes. the FSC® Controlled Wood requirements and those of the PEFC™ Due Diligence System.

Our use of the chain of custody and strict certification requirements has contributed to this figure. All of pulp suppliers are certified, in most cases in accordance with both FSC® Any non-certified material entering our products is subject to strict risk assessment processes, which meet





Yes, I care.

...because reducing internal traffic and maintaining mill safety are a priority for me.

The flow of internal traffic at the Stockstadt Mill was becoming increasingly complex. Together with our wood suppliers, we set a goal to simplify this process. We took a step back to carefully look at the way in which stem wood was delivered and weighed, and to find ways to improve the process.

The installation of two new weighing scales and a new gateway to the wood yard had an immediate and dramatic effect. As well as reducing overall traffic by 30% and lessening noise, the time spent by delivery trucks in the mill has significantly decreased. Typically, the cycle time for one lorry from arrival, to weighing full, unloading and weighing empty was 60-90 minutes. Now it only takes 30 minutes, knocking off 7,800km of internal traffic on an annual basis! It is a very satisfying outcome for all those involved.

I make Sappi eco-effective. How about you?

Shift Supervisor Wood, Stockstadt





To Have or Not to Have The importance of certifications

Tea Tönnov, Environmental Marketing Officer

Why are certifications important for Sappi?

Certifications are important for us because they are important for the end users. In order to have a certification for a printed product the paper needs to be certified as well. The choice of paper can be the single most important environmental decision that a printer makes.

Why are certifications important for the industry?

We are convinced that environmental statements are strongest when they are based on reliable data that are audited by an external verification body. Non-reliable statements would be devaluing the work that is being done in the whole industry.

What processes do we have in place to manage certifications?

Certifications have requirements on almost every aspect of our operation. We monitor and report our energy use and emissions to water and air. Our raw materials need to be assessed. Some certifications also have requirements for documentation and communication. In order to maintain our certificates, we have to align all our departments.

The Environmental Marketing team facilitates these procedures by coordinating the communication and reporting between the mills and certification bodies.

What are the benefits of EMAS?

EMAS (European Eco-Management and Audit Schemes) registration recognises us as an organisation that goes beyond minimal legal compliance, continuously improving our environmental performance and fully transparent in our actions.

What we especially appreciate about having all of our mills EMAS registered, is the reporting. The extensive environmental reports are publicly available on sappi.com. The original versions of the reports have the initials of the auditors on each page and they verify the reports figure by figure, sentence by sentence.

What do the ecolabels tell about the paper production? For graphic paper, the two leading ecolabels in our markets are definitely the EU Ecolabel and the Nordic Ecolabel. Because of the life cycle approach, we also monitor our suppliers' environmental performance. We exclude suppliers that have too high emission levels or use nonapproved chemicals.

How do you give visibility to vour various certifications? We provide details of our certifications when we speak with our customers on a daily basis. A certification factsheet is available on our website and provides an overview of all Sappi's certifications.

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Why Eco-effectiveness?

Sophie de Guignard, Environmental Marketing Communication

Where did the ecoeffectiveness concept come from and what is it all about? The word 'sustainability' tends to get used a lot by management, and is often thrown about for effect without really taking the time to understand what it means. Sustainability is very important and is the key to our future, but the challenge we faced at Sappi was how to make it more relevant to me, or to you, our stakeholders and our colleagues.

This is where ecoeffectiveness made its entrance.
Put simply, the term brings
together 'ecology' and
'economy.' In today's business
world we need to find ways in
which these two concepts can
work together. Ecoeffectiveness builds on our
existing approach to the
environment. The emphasis
now, however, is on generating
results through combined effort.

How can a single person be eco-effective?

Eco-effectiveness starts with each one of us i.e. every single person in Sappi, no matter what their function is, choosing to be responsible and to engage in ways to be sustainable. So whether it's separating waste, finding a better way to deliver products, or implementing a process improvement, everyone can do something. "Every little counts" has become our working motto.

Concretely, what have you been doing to help colleagues take eco-effective action?
We developed a set of educational tools to get the ball rolling. They include examples of very simple things that can be done like turning the taps off, turning computers off at night, car sharing and recycling.

Then we went and spoke to our colleagues in our sales offices and mills to see what they were already doing. We started collecting these stories from within the company to use them as inspiration for others. You can see examples of our eco-effective stories throughout this report; we have them on our website, as well as in poster format throughout the company. Everyone has a story to tell, it iust takes a moment of reflection to change a behavior, or to acknowledge something which is already happening on the sustainability front.

What's next?

We want to introduce ecoeffectiveness to our customers and suppliers. Sustainability is part of our everyday; we want to make it part of their every day too. But it's one thing being sustainable; it's another thing to talk about it. We want everyone to be comfortable speaking and communicating about sustainability. Our focus is to continue being eco-effective within Sappi on a day-to-day basis, and to educate those around us by sharing our stories and experiences.



Yes, we care.

...because "mighty oaks from little acorns grow," or as the Hungarian saying goes, "Little streams make great rivers." For us in Sappi Budapest, we have seen that by working together, we can make a difference

A charity based in the region close to our office has found a way to raise money by recycling plastic bottle tops. Volunteers collect and bring the bottle tops to a local plastics factory which donates money in exchange for the plastic. The funds are used to support disabled children by directly paying for specialised treatments that are usually very expensive.

We set up a collection point for the plastic caps in our office. In the beginning we were only a few; now the whole office is involved along with their families. By combining the efforts of our office and of my neighbourhood our last collection weighed 1,620kg which was exchanged for 121,000 HUF (approx. EUR 403)! As well as the environmental dimension to this initiative, it has shown us that every little action - like collecting plastic caps counts, and that by working together we can make a positive difference!

We make Sappi eco-effective. How about you?

Zsuzsanna Gál, Customer Service Representative, Budapest Sales Office.

Sappi's Green Ambassadors

We would like to introduce you to the eyes and ears of Sappi in the markets – our Green Ambassadors. Their role is to communicate information internally about sustainability related topics. They keep colleagues up to speed on industry developments that can be of interest to customers.



Erich Geist



Elvira Komisar Central Eastern Europe



Katja Bruns



Lasse Lerche Nordics & Baltics



Olga Soboleva



Bettina Wehi Switzerland



Helga Rad



Dima Mall



Mutlu Aktas Germany



Simone Melz



Juan Manuel Martinez



Vanda Salom Turkey



Rens Huij



Jana Geissler Germany



Germana Zani Italy



Angelika Piworowicz



Sibylle Hajostek Speciality Papers



Robert Bremer United Kingdon

Mill Environmental **Managers**

Sappi's Environmental Managers are based in our mills throughout Europe and follow environmental legislation at national and European level. They manage our certifications and permits, and are also responsible for managing environmental activities and training. They follow legislation at national and European level.



Oliver Bürger Sappi Gratkorn Mill,

lenni Kukkonen

Sappi Kirkniemi Mill,



arine Steegen Sappi Lanaken Mill, Belaium



Sappi Alfeld Mill,





Sappi Ehingen Mill,



Sappi Stockstadt Mill,



Environmental Marketing Team

Sappi's Environmental Marketing is responsible for sales support, environmental communication, environmental and legal compliance, and product and group certification.



Chain of Custody



Sophie de Guignard, Events and Environmental Marketing Communication



Environmental Manager



Tea Tönnov, Environmental Marketing



Yes, I care.

...because it is important to think carefully about how we use and generate energy. Organically polluted waste water left over from the pulp production process can be converted into biogas and used to generate electricity.

A change in our production pattern led to a decrease in organic pollution in our waste water, prompting us to adopt a new approach. We changed to a dual fuel operation with gas motors running on bio- or natural gas. This change has helped us to use our biogas more effectively, and to reduce the amount of natural gas used; it also gives us more flexibility in a highly volatile energy

The green energy generated with the biogas is equivalent to the average electricity requirement of 1.500 households. We received Green Electricity and Combined Heat and Power certificates for our efforts. It's a great outcome for Sappi and for the environment.

I make Sappi eco-effective. How about you?

Supervisor Raw Materials/Utilities, Lanaken Mill.





Stephen Blyth, Chief Financial Officer, Sappi Europe

PROSPERITY

Unlocking **Our Potential**

According to Stephen Blyth, Sappi Europe's Chief Financial Officer, "prosperity is about success, and to be successful we need to innovate".

What do we mean by prosperity?

I would equate prosperity with success. Success is not just about numbers, but financial success plays a key role in driving prosperity by providing opportunities for investment, growth and innovation. Being financially successful requires Continuous Improvement to meet increasinaly tougher targets year on vear. At Sappi Europe, we are on track to achieve our previously stated 2017 target of a 10% return on net assets. Looking forward, one of our key targets is to achieve an EBITDA margin of at least 10% by 2020.

How important is innovation for Sappi?

Innovation is critical in a very fastpaced world, both in terms of products and in the way we do business. We will not attract investment if we stand still.

How can we continue to attract investors?

Investors look for adequate returns on their capital in line with their risk appetite. Sappi's job is to generate consistent acceptable returns at risk levels appropriate to investors. We can achieve this in a number of ways, but of critical importance is the smart allocation of capital and resources across our processes. people and mills.

In a capital intensive industry like paper, it is necessary to tightly control the allocation of resources to maintain the operating assets. However, capital intensive industries like ours do generate good cash flows. We manage these cash flows carefully and invest appropriately. A prime example of this has been the cash utilised in recent years to complete strategic investments at the Gratkorn and Kirkniemi mills.

What is required for Sappi's long-term prosperity?

- Innovation is key
- Continuous Improvement in processes by always following best practice where it makes financial sense
- Investing in our people with appropriate remuneration and reward structures
- Maintaining our asset base in good condition to enable us to reliably serve our customers with quality products
- Generate sufficient cash resources to allow us to invest in future growth opportunities

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Marco Eikelenboom
Director Marketing & Sales Graphic Papers,
Sappi Europe

Developing a Sustainable Business Model

n a response to distributors and merchants changing their way of working to maximise margins by pushing costs back up the chain to the manufacturers, Sappi has embraced the opportunity to review its own model, market by market. In some cases this has resulted in introducing a direct channel to the customer. This new way of doing business has challenged the status quo, with great results for Sappi.

A strong local presence has always been central to Sappi's overall strategy. We believe that although paper consumption is declining, there will continue to be a strong paper industry in Europe, and to be a leading player you need to be able to add value to a customer's business.

"To do that you need intimate knowledge of their business and their markets," says Marco Eikelenboom, Director Marketing & Sales Graphic Papers. "It is through our people in the market that we get prior knowledge of any changing customer needs."

The one defining characteristic of commercial print is the sale of paper through a network of merchants. These merchants often hold their own stock and distribute our paper to their printers. Reduced paper demand has not just had an

impact on paper products. It has affected everyone in the chain – and in particular the merchants.

To cope with squeezed margins, some merchants have reduced their working capital by holding less stock and increasing their indent orders. This calling off of orders from Sappi's stocks resulted in us keeping larger stocks and dealing with the logistics and stock-keeping costs that go with it. With our cost to serve the market increasing rather than decreasing, our business strategy needed revision.

Indent Sales

This trend towards indent sales varies across Europe. Germany is one example where the indent business is big. "Indent business in Germany accounts for about 70% of the German market," says Flavio Froehli, Sales Director Commercial Print. "This means that some merchants are increasingly abandoning their traditional role and are merely functioning as a trader, which is not a sustainable business model at today's cost structure."

Sappi viewed this situation as an opportunity to develop a new framework to put our business and our merchants on a more sustainable footing again to jointly serve the market at the lowest possible cost.

Sappi&You

Sappi&You was the result; a new and successful way of doing business. "If we were holding the stock anyway, it made far more sense for the biggest printers to order directly from us for our products as well a comprehensive service. Our e-commerce platform was also on hand to provide direct access to mill cutter reels and production cycles," says Flavio.

Each market has different dynamics. Therefore we need to tailor solutions. Dealing direct is also not the solution for every printer and every market. It all depends on the specific needs. Our sales teams have been sitting down with our preferred merchant partners to implement a new business model that will suit both parties, always looking at creating the most effective supply chain.

Publication Papers

"The success of print media and our business depends on the perceived value of print when put against other media," says Antti Makkonen, Sales Director Publishing. Working in a highly competitive business environment, Sappi Europe's approach to ensuring that it is the 'go to' publication paper supplier has been to create and nurture partnerships with customers, working with them to offer solutions as well as products.

By developing service concepts like 'Dynamic Replenishment' where Sappi automatically tops up the printer's stock based on the volume of his previous print run, we are doing our utmost to improve mutual business performance. Working together with our customers, we can help them to achieve higher revenues, with the potential to reduce costs.

At the end of the day, business rationale is what all actors in the chain are concerned with. Printers understand the economic reality, and want to be assured of sustainable and quality supply. By anticipating change and working with its partners in print, Sappi can continue to maintain a sustainable business model.

Sustainable Business





Yes, I care.

...because working with, and investing in, our local communities leads to sustainable, long-term partnerships. The Gratkorn mill covers an area the equivalent of 106 football pitches - which means a lot of neighbours! It's also one of the largest employers in the region.

With such a large site, we have to be very conscious of the potential impact that the mill's industrial processes may cause, especially in relation to noise and light emissions. To ensure a high level of interaction with the local community about any potential issues, Sappi launched the "Sappi = your neighbour" programme.

By creating effective channels of communication, the programme has helped nurture acceptance, trust and an overall understanding about what we do. Perception has improved and we have received constructive suggestions from our neighbours. Not a single objection was registered in our last **Environmental Impact Assessment** (EIA). For us, it's a great example of true partnership in action, with benefits for all.

I make Sappi eco-effective. How about you?

Christian Jeran, Authority and Property Affairs,

Partnering With Communities

We continue to be part of the communities in which we work.

Active corporate citizenship programmes relevant to the needs of the communities where we operate ensure that we promote socio-economic development in these communities. Each mill takes a different approach, but engagement is a priority for all.



Alfeld Mill

Alfeld Mill is closely connected with schools and universities. As well as being a prominent figure in the German Paper Industry, the Mill Director is also a member of local county committees, staying connected to other industry representatives and politicians.

Brussels Head Office

For the past five years, the Brussels office has been running an employee-led tree planting initiative in association with ANB (Agentschap voor Natuur en Bos), the equivalent of the Department of Forestry in Belgium. To date, over 12,000 trees have been replanted by Sappi employees in La Forêt de Soignes, a forest located in the south-eastern part of Brussels covering an area of over 4,400 hectares.

To mark the 625th anniversary of the German paper industry, Sappi's Ehingen Mill has opened its doors to the public with a series of monthly mill days (guided tours and presentations). The mill actively engages in the community by giving job presentations in the school, inviting students to participate in mill tours and sponsoring local sports events with paper for brochures. The mill's running team participates in the annual Ulm marathon. In 2015, Sappi supported a group of Eritrean runners, who are also asylum seekers, welcoming them to their team and



Ehingen Mill

providing them with running gear.



Gratkorn Mill

- Gratkorn Mill undertook some major renovation work in 2015. In advance of work starting, the project team invited neighbours from the area to an information session about the build. They kept in regular contact with them during the work, distributing leaflets and organising a celebratory BBQ at the end, to which partner companies involved in the project were also invited.
- In June 2015, the third edition of the Gratkorn running event took place. The initiative is a great opportunity to experience the mill from a different perspective. The event is open for employees, relatives, friends and neighbours and usually draws around 200 participants.



- Kirkniemi Mill holds regular meetings with its neighbours to give them updates about what is going on at the mill and to discuss the local environment. As a result of ongoing engagement, the annual Global Safety Awareness Day attracts several hundred participants from the community each year.
- Nurturing the paper making tradition is a priority at the mill. Sappi School Ambassadors make it their business to visit local schools, introducing them to potential professions in the forest and paper industry.
- In an effort to promote work safety in the Lohja area, Kirkniemi Mill launched a successful work place safety competition, challenging local companies to improve working conditions.



Lanaken and **Maastricht Mills**

Maastricht and Lanaken Mills organise open house activities every 3-5 years where locals are invited to try out papermaking, learn about safety and get involved in green thinking. The initiative is highly appreciated by the local community. The mills also sponsor local societies with paper for printing their leaflets.



Stockstadt Mill

■ Stockstadt Mill produces a bi-annual mill Magazine "Ihr Nachbar" which is distributed to every resident in Stockstadt and nearby Mainaschaff. Its purpose is to keep locals informed about mill-related topics. The mill also engages in regular meetings with the town council, the Mayor of Stockstadt and of course the residents themselves, particularly when new projects are on the horizon.



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Sappi Certification Chain of Custody

Our fibre sourcing is transparent and traceable



Saw mill

30% of our wood needs are covered by wood chips, a saw mill by-product. This cascaded use of wood optimises material efficiency.



Forestry

All of our fibre comes from controlled sources and at least 70% of all our fibres are sourced from FSC[®] or PEFC[™] certified forests.



Wood purchasing

Our wood procurement team meets our pulp mill's needs, combining logistics and security of certified wood supply.



chain of custody coordinator. Internal and additional external auditing ensures that only risk assessed fibres are used for paper production.

independent third party verification.

Did you know that it is easier for

than the origin of most of the

food you eat?

you to trace the origin of our fibres



Customer

With a verification system in place higher up the supply chain, the printer only has to check that the certification claim is correct on the invoices and delivery documents.



Consumers

The end user can see the FSC® or PEFC™ logo on the final product as a proof of our promise.



Chain of custody certification allows a transfer of forest products from the certified forest to the consumer

Everyone in the chain of custody requires independent, third-party certification. Although this entails a lot of effort, it ensures that standards are met and that consumers know for certain that they have contributed to sustainable forestry with their product purchase.

Value Chain of Forest Products

We use pulpwood directly sourced from forests, and wood chips, to make paper. The quality of these forestry by-products is not high enough for use by other wood users. As a result we play a very important role in the forest product value chain. Why waste wood by burning it directly to make energy, when you can make renewable energy from wood-based products like paper? Concretely, pulpwood is used 2.4 times when used as paper, and only once when used to make energy. The pulp and paper industry creates seven jobs for every one created by the biomass energy industry, and is worth five times the value. The great thing about paper: it can be used many times and the residues from waste paper processing are used for green energy generation.¹



One Year of Business: 12 million Trees

Sappi finances the planting of 12 million seedlings by external growers every year in order to cover our wood supply needs. This is equivalent to the planting of 22 trees on average per minute.²



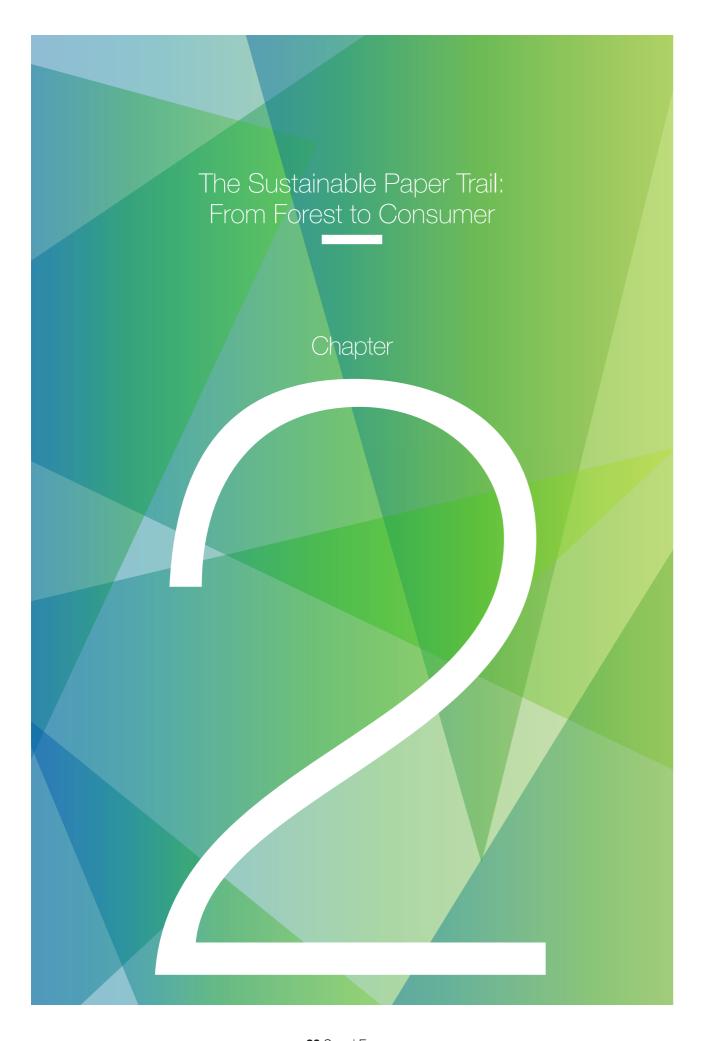
Life Cycle

When our paper becomes waste, the cycle usually starts again. The value of waste paper tends to be high enough to cover collection and sorting costs. Consequently there has always been strong demand for waste paper. This is a process we all can support by recycling all our paper waste.



¹ Udo Mantau, University of Hamburg 2011, Wood Flows in Europe (EU 27), http://www.cepi.org/wood_flows_in_europe / Pöyry 2012, Employment and Value added – a comparison between the European pulp and paper industry and the bioenergy sector

² Sappi Europe Sustainability Report 2013



FOREST

Where Does Our Wood Come From?

n order to meet our fibre needs in 2015, we manufactured half our pulp ourselves from roundwood and wood chips, and bought the other half from market pulp suppliers. Sappi has always bought its fibres from known | supply to Lanaken Mill. and respectable suppliers, yet customers and the public at large are demanding further reassurance. This is a forestry practice in which

- Is the fibre from a legal source?
- Is there a risk of genetically modified material?
- Is local biodiversity monitored and respected?

Sappi sources roundwood from the thinnings of mixed forest stands in Europe and boreal forests in Scandinavia.

The woodchips that we purchase are a by-product from saw mills, which in turn get their roundwood from different forestry sources. Similarly the origins of the pulp that we purchase are diverse. With so many players in the chain, keeping track of our suppliers, and in turn their suppliers, can be very challenging.

Suppliers to Sappi must agree to the company's Group Supplier Policy which outlines Sappi's commitment to Sustainable Development. It is the procurement team's responsibility to ensure that strict environmental standards and certifications are met by our suppliers throughout the chain.

Sappi sources its pulp from mills in Latin America, where the suppliers own and manage large eucalyptus and pine plantations. The land is divided into sections of intensively managed plantation areas and indigenous forest that is fostered to recover and achieve a higher level of

biodiversity. The natural ecosystem that is maintained in turn protects the forest stands.

Sappi Europe's recent acquisition of the remaining shares in Sapin has helped to secure the future of wood

Regeneration Forestry

most trees in an area are uniformly cut. It is typically the way that boreal forests are harvested. It can be done in such a way as to maintain the long-term value of the forest whether this is in relation to timber, game, tourism, etc. Measures taken include restricting the size of such types of clearcut, protecting nesting trees and leaving dead trees standing to help certain species (e.g. birds of prey). Some conservationists even advocate clearcuts as many plant and tree species require an open space.

Under fully natural conditions, forest fires have the same impact as clearcuts. Some forests are more resilient to such change; and others actually need it to regenerate.



30 Sappi Europe 31 Sustainability Report 2015 Temperate forests, like those in central Europe cannot cope well with such extremes. As a result, clearcuts are very limited or almost completely banned. Instead these forests are thinned. The weaker trees are removed to create space and light for the fitter trees which are left to grow. These stronger trees create healthier forests that are more resistant to wind, pests and diseases. They also generate a higher income as a result of their better wood quality.

It is challenging from a logistical point of view as the remaining trees cannot be damaged but it is essential to respect the standards that have been established.

The combination of pulp wood (small diameter log pieces) and woodchips forms one of the lower value wood categories. Sappi's interest is in the fibres, so crooked or twisted grown trees are fine for us, but refused by saw mills.

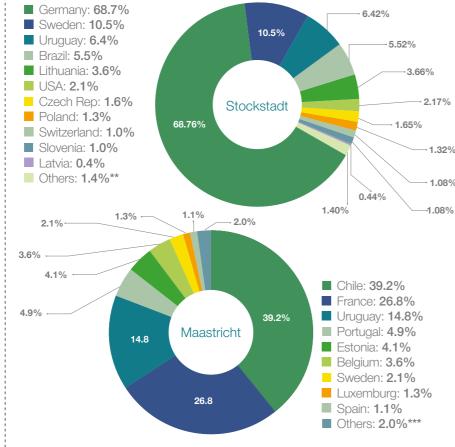
Challenges for the Future

Meeting these strict standards can be a barrier to entry for new suppliers. Sometimes small forest owners or community forests just cannot afford the extra costs associated with acquiring certification.

The demand for wood for biomass is increasing, threatening the sustainable approach to the growing and harvesting of wood. Zero certification requirements combined with European subsidy schemes that appear to incentivise the energetic use of wood over its material use are very worrying. With market entrants prepared to pay very high prices for this kind of wood, all the hard work that we have put into ensuring high sustainability standards for our forests is being jeopardised.

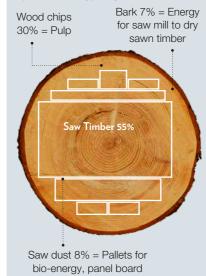
Sappi's insistence on implementing its sustainability policy throughout the supply chain means that we can identify the origin of all our wood. For other sectors, like plastic, aluminium steel or even food, this is not at all done yet. In our industry, it's about maintaining a long-term perspective on the environment.

Fibre Origin of our Sustainability Report*



DID YOU KNOW?

In the context of sawn timber, about 30% of the wood in a tree stem goes into making paper. Here is how the wood from a full-grown European spruce tree is typically used:



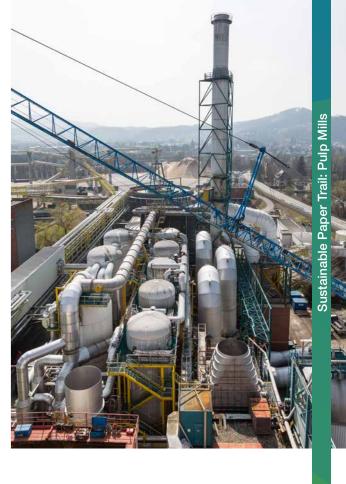
Working Towards a Bio-based Economy

In 2014, the European Union and the private sector formed BIC, a public private partnership (the Bio-based Industries Consortium) to accelerate the development of technologies necessary to help reduce greenhouse gas emissions. The EU is funding the partnership with EUR 1bn; the private sector with EUR 2.7bn.

Sappi is one of the 38 founding members of BIC, and Mat Quaedvlieg (Director Manufacturing, Sappi Europe) is one of its board members. BIC now has over 200 members from a mix of sectors – covering agriculture, energy, paper and chemicals, as well as technology providers. Within the membership are companies, universities and research centres. All members have committed to invest in collaborative research or in the development of bio-based technologies.

PULP MILLS

Commitment to R&D



appi Europe is committed to focusing its Research and Development resources to enhance our Specialised Cellulose business, exploring the micro and nanoscale potential of woodfibre and biorefining — extracting biochemicals locked up in wood.

Developing and commercialising NBIC technologies (Nanotechnology, Biotechnology, Information technology and the Cognitive sciences) will enable our evolution towards extracting previously untapped value from the wood we use to make paper and pulp.

Sappi Europe produces pulp in its Lanaken, Gratkorn, Kirkniemi, Ehingen, Alfeld and Stockstadt mills.

Rebuild of the Liquor Boiler in Gratkorn Mill

In Spring 2015, work began on the rebuild of the liquor boiler in our Gratkorn Mill. The purpose of the strategic investment was to facilitate the rebuilding and upgrading of critical parts of the liquor boiler and recovery plant. From an environmental perspective, the objective was a decrease in noise pollution and in NOx/SO₂ emissions above and beyond current requirements.

In total EUR 70m was invested in upgrading the mill's paper pulp

production facilities and PM11 in further improving paper quality to meet current and future customer requirements.

By summer 2015, the plant was already running at levels of about 90-95% capacity, with the majority of the reconstruction done: with some further fine-tuning measure required in order to reach full load.

Mill collaboration allows successful knowledge transfer

Lignin is a three-dimensional polymer that binds a tree's cellulose fibres together. The pulping process generates a by-product known as liquor, and it is here that the lignin is found. Using the sulfite cooking process, the lignin in the liquor becomes sulphonated, producing

Lignosulphonates Chemical Applications:

- **Dispersing:** Grinding aid, pigments & dye
- Thinning / rheology control: concrete admixtures, ceramics
- Binding: Pelletising
- Surfactant & Binding: Dust Control
- Other: Chelating Agent.

water soluble lignosulphonate. In this form it can be used as a natural binder, a dispersing agent and a surfactant. It is of particular interest to the agricultural and construction sectors amongst others.

Sappi Europe has lignosulphonate storage capacity in Stockstadt Mill (3,500 tonnes) where Sappi-owned CWZ (Chemische Werke Zell-Wildshausen GmbH) manages the black liquor derived from the pulp process. Stockstadt Mill takes a portion of the liquor to market, and uses the other portion to generate energy. Sappi's Tugela Mill in South Africa also takes its liquor to market and has benefitted from Stockstadt Mill's experience to do so.

Louis Kruyshaar, Group New Business Development Manager, Sappi Limited, South Africa, was involved in the collaboration: "With the input received from our colleagues in Stockstadt (CWZ), we have now reached a point at the Tugela Mill where we take 100% of the liquor to market. Working with Stockstadt (CWZ) we gained a better understanding of the business potential of lignosulphonates as well as the sustainability dimension."

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PAPER MILLS

Understanding Paper

rint remains a key business driver in the digital age that we live in. Paper plays an important role in commercial success, particularly when combined with other digital and marketing media. Increasingly we are seeing digital and print media working hand in hand to reach customers at different points during the day. Paper, as part of the media mix, completes the

multichannel brand approach. But print quality is key - this is what creates the dreams and aspirations.

importantly understanding our customers and their needs, means that we are constantly finding ways to improve our products and our services. The result has been a number of significant developments in our mills, improving efficiency and performance.

Continuously Improving Energy Efficiency in Kirkniemi Mill

Understanding paper, and more In 2013, Sappi Europe announced its intention to significantly invest (EUR 56m) in its Kirkniemi Mill in Lohja, Finland. The decision to build a new power plant was key to supporting future operations, safeguarding the competitiveness of the mill, and backing the company's drive for cost leadership.





The new plant opened six months ahead of schedule in September 2015. The inauguration ceremony was held in the presence of Mr Olli Rehn, Minister for Economic Affairs (Finland), Mr Pasi Laine, CEO of Valmet, and Mr Berry Wiersum. CEO of Sappi Europe.

The new power plant will significantly improve the mill's energy efficiency by decreasing energy costs and securing energy supply. The plant will flexibly use solid fuels such as bark from the mill's debarking process, and other wood based fuels and coal.

PM11 Performance at Gratkorn Mill

Sappi's largest mill is Gratkorn with an annual capacity of close to a million tonnes. Approximately 95% of production is exported, of which around 80% goes to European markets. The remaining 20% is sold outside of Europe. Most of this volume is produced on the PM11.

When it was first installed in 1997, the PM11 was the largest and most advanced machine in the world. Some 17 years and 10 million tonnes of paper later it has had its first major rebuild.

Rather than increasing capacity, the goal of the rebuild was to increase the maximum grammage for triple coated papers from 250g/m² to 350g/m² and to improve paper quality. To achieve this, a new dewatering system has been

installed and there have been extensive redesigns of the press section and the breaker stack as well as the installation of new quality and process control systems. By improving efficiency, specific emissions have been reduced.

PM11 is back up and running following the rebuild, and delivering against expectations.

Managing Change at Alfeld Mill

With a capacity of 270,000 tonnes per year, Sappi's Alfeld Mill produces technical and packaging papers on its five paper machines. Almost half of the mill's capacity comes from PM2 which was rebuilt in 2013 following a EUR 60m investment.

The mill's paper making tradition dates back to its foundation in 1706. Today it also hosts Sappi's competence centre for Speciality Papers and Board. Alfeld is now 100% dedicated to the Specialities business.

The PM2 machine is integral to Sappi's plans to significantly increase its presence in the specialties market. As well as being particularly fast, it is known for being able to produce a very smooth surface, high dimension stability, higher bulk and lower penetration of coating. The machine is also extremely versatile. All of this combined has meant that Sappi has been able improve its existing products as well as speed up the development of new ones.

History of the **Alfeld Mill**

1706 - Foundation

_____ 1851 - First Paper Machine _____

1882 - Start up of pulp production in Alfeld -----

1990 – First mill to produce TCF bleached pulp & paper



1992 – Integration into Sappi Group

2004 - Renaming into Sappi Alfeld Gmbh -----

2006 - 300th Anniversary



2013 - Transformation into Speciality Paper Mill

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Thomas Kratochwill, Sales and Marketing Director, Specialities

New Products

Our Speciality papers are a key contributor to the future of renewable packaging solutions

ince starting up the PM2 in 2014, Alfeld Mill has already launched four products:

- Mineral Oil Barrier paper (Algro® Guard M, gravure printed primary packaging for pouches, sachets, bags and wrappers and Leine® Guard M barrier paper grades for inner bags.)
- Algro® Vitess, a flexible packaging grade (suitable for a wide range of packaging applications, including dry food products, confectionery, tea, coffee and pharmaceutical products.)
- New additions to the Algro® Sol DN release liners range of Silicone Base Papers (mostly suited for office and stationery use, tape and industrial applications, the expanded range targets new markets including pressure sensitive adhesives.)
- Algro Thermo[™] is a new premium quality base paper for the direct thermal printing market. It is aimed at converters and has been designed to provide a superior optical appearance for tickets, labels and other thermal printing applications.

As well as ensuring that brand owners and converters can test their papers on the machines, the mill has set up a three-year programme to manage the change with a focus on customer visits and training.

Specialities Give Maastricht Mill a New Lease of Life

Sappi's Maastricht Mill has a significant role in supporting Sappi's specialties business. For the last couple of years, the mill has been working closely with Alfeld Mill and R&D, and has been gearing up to manufacture a new Speciality product – a Folding Box Board (FBB) called atelierTM.

atelier™ has been developed with both the packaging and graphic sides of the folding boxboard market in mind. "We did extensive research and we know that we are bringing to the market an interesting and relevant

cartonboard concept" says Lars Scheidweiler, Product Group Manager, Rigid Packaging.

The product offers new opportunities for companies who want a premium FBB packaging grade that optimises visuals and performs perfectly in converting, but who may not want the costs associated with a premium Solid Bleach Board.

Potential applications range from packaging for food, confectionery, cosmetics and beauty care to electronic and household goods. atelier™'s strategic location in Maastricht facilitates delivery to anywhere in Europe.





TRANSPORT

Supply Chain and Logistics

inding more efficient ways to transport our paper to our customers is a priority, as is minimising our environmental impact. Hansjürgen Peichler, Manager Logistics, has prioritised flexibility in order to provide options. "Sappi Europe has shifted to an intermodal transport approach, focused on reducing our reliance on trucks, and adopting a flexible approach to delivering our products."

Optimising Logistics Networks

Over the last two years there has been a lot of emphasis on both outbound and inbound logistics, working with our procurement and

Inding more efficient ways to transport our paper to our customers is a priority, as is minimising our to better utilise existing networks. The logistics services that we offer have been fine-tuned and are as intermodal as possible.

Sappi's Baltic Bridges initiative is all about listening to our customers, reducing freight costs, keeping the working capital in focus and also lowering our impact on the environment. Sappi's Wesel-based logistics team is always looking for improvement, either in relation to emission reductions, increased flexibility or efficiency. Using a combination of short-sea routes and barges has had a very positive impact on reel shipments from the Kirkniemi Mill to Wesel. Containers leave Kirkniemi by train to the port

of Helsinki, where they are brought by sea to Rotterdam and then by barge to Wesel. Whereas previously the containers would have been sent back to Finland empty, they are now filled with products that arrive in Wesel by train from Gratkorn, and sent back to our Nordic customers full, closing the loop. Using transport by train, sea and canal has removed the need for trucks altogether. It has also provided flexibility should a route need to be changed.

Similarly, deciding to change ferry port, and to use a new warehouse close to Warsaw in Poland has resulted in a faster and more flexible service. Rather than relying on a single weekly shipment of reels from Kirkniemi Mill (via the port of Hanko (Finland)) to the port of Gdynia (Poland) where it used to have a warehouse, Sappi now uses the Estonian port of Tallinn as a base from which to reach Poland. The Teresin warehouse near Warsaw receives regular shipments from Tallinn which it then dispatches to customers who are located nearby. The new route is more cost effective, using otherwise empty trailers, with no increase in emissions.

Key Hubs

As part of its focus on optimising logistics networks and reducing costs, Sappi Europe has been investing in its main hubs in Wesel, Zeebrugge and Gratkorn.

The location of Sappi Europe's storage facilities in Zeebrugge means that deliveries from several mills or orders can be combined for customers into a single delivery, increasing efficiency.

In Wesel, as part of Sappi's new 'go to' market strategy, the green light has been given for the building of a state-of-the-art multi-purpose paper storage logistics facility of approx. 20,000m². The facility will hold more stock, keeping units for German and Benelux customers in particular, and will be fully operational by the end of 2016.





The Gratkorn to Wesel Express

Sappi has implemented a full train concept with a dedicated train between its Gratkorn Mill and the Wesel hub. Six trains per week carry paper and pulp between the sites. Not satisfied with the volume being transported, the logistics team conducted a situation analysis to identify ways in which to increase capacity.

The result was positive; cargo capacity was increased by six tonnes per train. Concretely this means two less trains needed per annum or the equivalent of 110 full trucks by road. The analysis also increased flexibility and facilitated 'right on time' orders. Conclusions reached have been used as a case study by the Graz University of Applied Sciences to demonstrate how an environmentally friendly project can reduce costs.



Sappi&You is about direct collaboration with printers, like Westphal Rollenoffset, Germany

Sappi



CONSUMERS

Adapting to a Changing Market

entral to sustaining our business is an understanding of our consumers and their needs. Customers today have immediate access to more information than in the past, and they have often already made their purchasing decision before contacting suppliers.

Similarly, our customers must have complete trust in our products when it comes to complying with regulations. Key to this, as well as testing, is our experience: and by this we mean the expertise of knowing how to use raw materials (and how they interact with each other) so that they comply with regulations.

This expertise is a service we offer to our customers, who often come to us for advice when regulations change or when they want to launch their product in a country with different regulations.

Making Use of E-commerce

Sappi'e e-commerce platform site, launched in 2013, is continually improving to make sure that it responds to our customer's evolving needs. Stock and production availability can be checked, and the exact status of every single order, from placement until delivery can be tracked in real time. With financial reporting tools as well as complaint reporting, we can ensure that customers have all the administrative information needed for their businesses, and that we can monitor satisfaction.

Sample Services

Seeing and feeling a finished product is critical when it comes to choice of paper. At Sappi, we create over one million samples for our customers every year within days of ordering. Possibilities range from bespoke handmade dummies, to real life printed

samples, to A4 unprinted or large format sheets for trials.

The ability to show customers our products in a variety of formats helps them to make a more informed choice. The sample service run from our Kirkniemi Mill specialises in publication paper products. Due to the particular services required by this market, a much more stringent quality inspection is required.

Loewe logistics is an outsourced partner; they focus on creating samples for commercial print products. Loewe's location and fulfillment specialisation makes them ideally positioned to service the more complex commercial print market.

The Kirkniemi team produces between 300 and 400 dummies per month. The service is instrumental in maintaining sales efforts and is a great way of connecting and working together with customers.



Yes, I care.

...because stronger pallets last longer. Collaboration with our merchant Igepa and our printer Saxoprint has resulted in a change to the way we deliver our paper. The weight of the XXL paper was damaging the old pallets, causing them to bend and break in the middle. We invested in stronger, more durable pallets designed to carry heavier loads.

Happy with finding a solution for our customer I wanted to see if we could go even further. What if we re-used the pallets? The new pallets can be used up to nine times. By returning them to the mill after delivery we are taking care of our investment in more durable materials, supporting the environment by re-using the pallets, and actually savings on costs!

By taking the time to listen, and by opening our eyes to other possibilities, we were able to implement a change that is of benefit to us, to our printer, and to the environment. Every little counts!

I make Sappi eco-effective. How about you?

Stefan Raabe,

Key Account Manager, Hannover Sales Office



Responding to the Customer with New Packaging

Packaging, and the way we view packaging is changing. Reducing plastic consumption and tackling climate change are seen as being hand in hand. Non-paper alternatives exist but unfortunately, these tend to be expensive to make, cannot be recycled and in some cases are subject to environmental taxes.

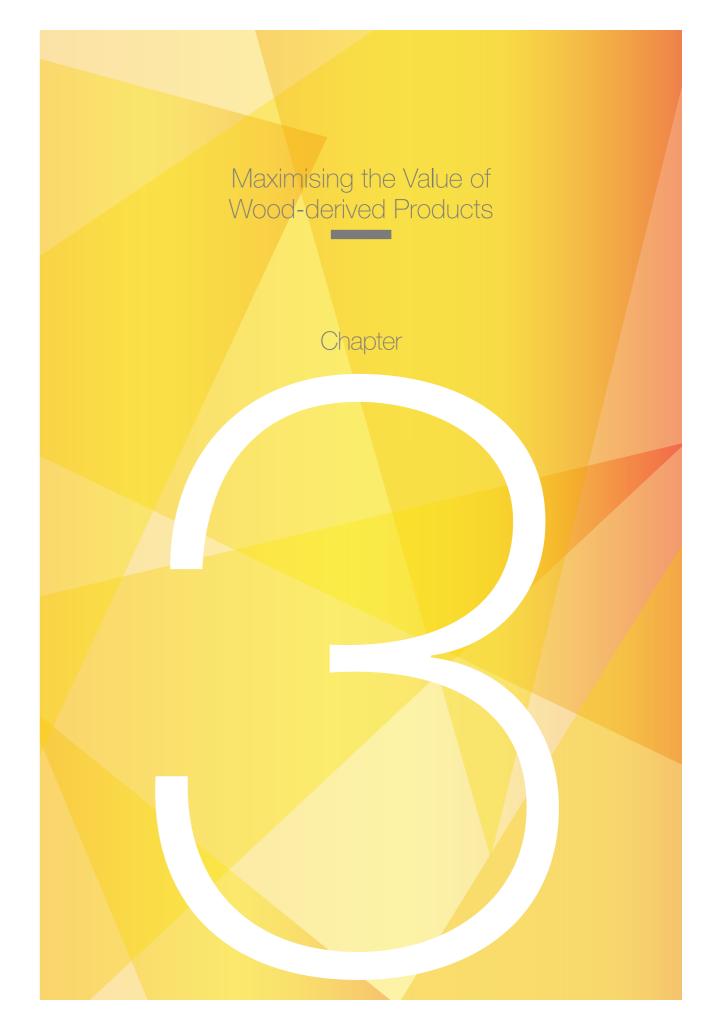
The paper industry has stepped up to embrace this opportunity. New technologies have resulted in packaging solutions that have the same functionality as plastic – they can deal with vapour and fat transmission – but can be fully recycled. The use of a mineral oil barrier in conjunction paper gives it added functionality.

All Speciality papers made at Alfeld Mill (except for release liner grades) comply with European pipeline.

and US regulations for paper being in contact with dry foodstuffs.

Christian Torborg is a Food Technologist for Sappi: "The certifications that we have mean that our products can be used in a variety of food packaging composites and other speciality packaging and label applications. As of this year, we also hold the ISO 22000 hygiene certificate. This is the same standard for companies who specialise in actually packing food and means that the mill fulfils hygiene requirements for an organisation that is part of the food chain."

Using our expertise and our understanding of our customers and markets, we are able to innovate to develop products to meet a need. Food packaging will remain a very important part of Sappi's Speciality Papers, with many exciting innovations in the pipeline.





Maarten van Hoven Group Head Strategy and Legal

On the Cusp of Renewal







ur industry stands on the cusp of renewal as plantation- and forest-derived bioproducts emerge as a global game changer in a carbon-constrained future.

Our emphasis on, and investments in, technological innovation places us at the forefront of moving beyond just pulp and paper as we unlock and commercialise the potential of the biochemical extractives, micofibrils, nanocellulose fibres and cellulose nanocrystals found in wood.

Stakeholders will increasingly be expecting sustainable, renewable and innovative carbonneutral products that add value to their lives and their communities. Climate change concerns and resource scarcity will raise expectations to make more and better with less; extract more value from resources and continuously reduce our environmental footprint.

Our integrated pulp and paper mills are ideal platforms from which to meet future market demand for carbon neutral bio-energy, biochemical, biomaterials, nanomaterials, neutraceuticals and pharmaceuticals. Integrating the extraction and beneficiation of plantation- and forest-derived biocompounds with our mill processes is significantly more efficient than standalone operations; giving us a head start in growing adjacent businesses that add additional value to the wood we use in our pulp and paper business.

Our strategic focus will remain open and flexible to opportunities so as to provide our business with the best possible options to deliver value into the future.

Innovation @ Sappi

Today's innovations are the foundations for our industry's future. Launched in 2000, Sappi's Technical Innovation Awards foster and celebrate innovative talent from within the company, supporting the development of commercially and environmentally sustainable solutions for the company. A team from Maastricht Mill who invented a new way of producing board grades is the proud winner of the 2015 awards.

Innovation helps us to challenge the status quo, to rethink the way we do things, and to find ways of being effective in an efficient way. Nominations for the TIAs need to demonstrate technical innovation. They are also judged on

economic impact, market leadership value, product/process impact and customer satisfaction.

Ultimately, innovation must serve a purpose; in terms of what customers want, the manufacturing process, or a product's characteristics. The TIAs drive sustainable innovation within Sappi helping us pave the way for the next generation of people, products and processes.

Nanofibrils – Tomorrow's Technology Today

Following a three-year partnership, Sappi and Edinburgh Napier University have discovered a new "low-cost process" to make lightweight nanocellulose on a commercially viable basis. The versatile material has previously

Nanocellulose Facts:

- 5-20nm long and just a few microns wide
- Stiffer than Kevlar
- Electrically conductive
- Tensile strength up to eight times that of steel
- Absorbent
- Renewable and abundant

been produced by intensively processing wood pulp to release ultra-small, or 'nano' cellulose fibres – each so small that 2,000 could fit inside the width of a single strand of human hair.

The newly discovered process drastically reduces the amount of energy needed to power the process, as well as the need for expensive chemicals.

Nanocellulose, extracted from woodfibres, has a number of unique optical, barrier and strength properties. Unlike other lightweight, high-strength materials based on fossil fuels, it is completely sustainable, making it very desirable as a new material for various industrial and transport applications.

The product can be used in a huge range of applications – including wound care, packaging, touch screen displays and car panels – a potential market that could reach 35 million tonnes per year within 10 years.

To facilitate production, Sappi is building a pilot plant to manufacture low-cost cellulose nanofibrils. Work started on the plant in January 2015 in the Brightlands Chemelot Campus (Limburg, the Netherlands), in time to start operations in early

2016. It will produce about 10 tonnes of nanocellulose per year.

There are a number of aspects of the plant that need to be studied, including efficiencies, recovery systems, energy requirements and chemistry. Scaling up is expected to be completed by 2017, enabling commercial scale operations by 2019.

Symbio

By investigating what to do with fibres outside of paper making, Sappi has dipped its toes into yet another sector. The Symbio team has used cellulose fibres to produce a partly bio-based plastic that can be employed in a variety of applications e.g. loudspeaker enclosures, parts for car interiors, consumer electronics, toys.

The fibres give the plastic certain characteristics; rigidity, weight reduction and a lower carbon footprint. Symbio is a first step in maximising the value of woodderived products. It's exciting to explore new possibilities and innovations with the materials we now use to make paper.

The initiative is also a great example of integrating our approach to business and the environment,

using what we know to do more.

"We are able to retain our sustainable approach whilst broadening our horizons," says Jacob Hartstra, New Business Development Manager, Sappi Europe.

Symbio has been showcased in CEPI's 2015 Report as one of the pulp and paper industry's most innovative products.

Regional Centres of Excellence

Sappi, like most innovative international corporations, is building local centres of excellence where experts focus on highly specialised research. Twenty years ago, R&D was made up of generalists who knew everything about coatings, fibres and raw materials. Today we need a different kind of person. We need specialists with expertise in very specific fields – hence the regional centres of excellence.

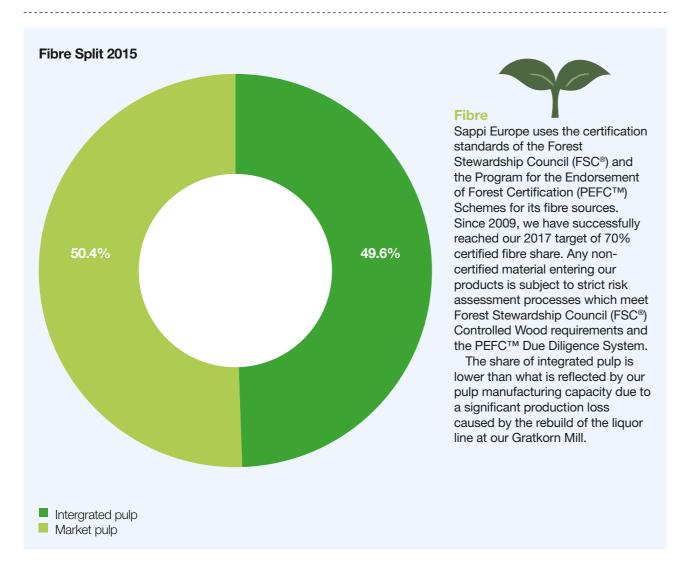


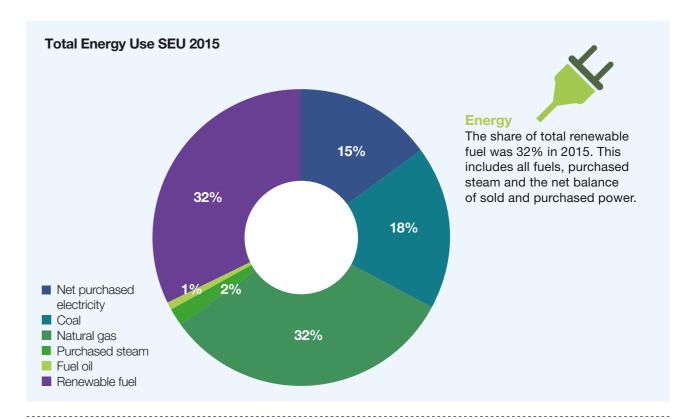
Chapter 4: Key Performance Indicators

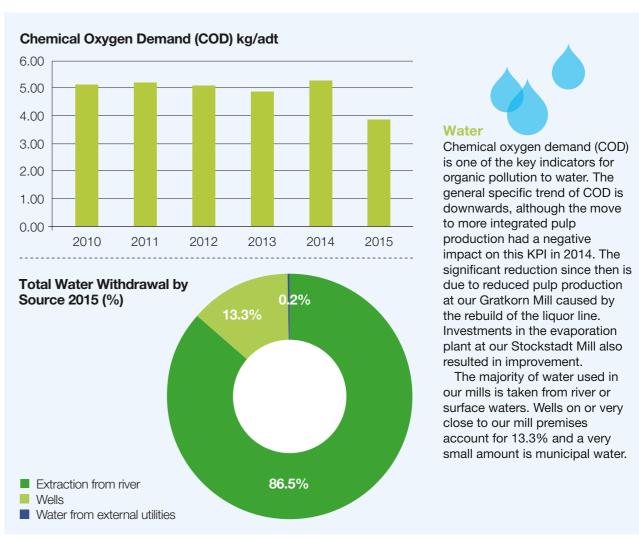
Keeping Track of Our Performance

ur pulp and paper products are derived from renewable resources made with high levels of renewable energy. Sappi Europe uses key performance indicators to measure and track its environmental performance. We track key metrics for fibre, emissions, energy usage and the impact of our operations

on air, water and solid waste. We use this data when setting improvement goals related to our operations. In addition to these aggregated figures for all of Sappi Europe, figures for each individual mill are presented in the EMAS (Eco-Management and Audit Scheme) reports available on www.sappi.com.







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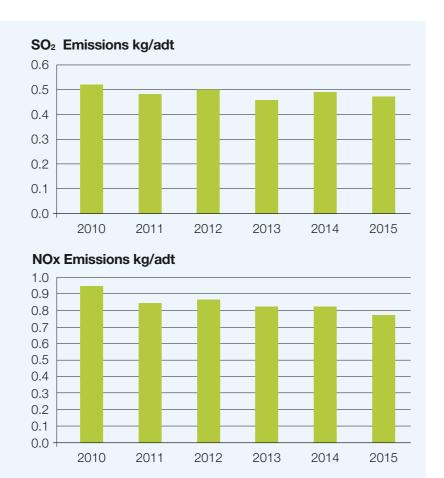




Emissions

Sappi Europe keeps track of its CO₂ (carbon dioxide), NOx (nitrogen oxides) and SO₂ (sulphur dioxide) emissions. In 2015, CO₂ specific emissions decreased by 1.5% compared to the reference year (2012), continuing the slightly positive emission reduction trend. Specific NOx and SO₂ emissions also decreased in 2015. The rebuild of the liquor line at our Gratkorn Mill and the reduced production of pulp were contributing factors.

Note: Specific relates to scaling the volumes per tonne of (saleable) paper



Waste to Landfill kg/adt 12 10 8 6 2 2011 2010 2012 2013 2014 2015

Managing our solid waste and finding ways to minimise it is a priority. No organic waste is landfilled. The majority of waste that is sent to landfill is ash. Where possible, organic waste material generated at our sites is used as a renewable fuel on site and to produce by-products. Waste paper, scrap metal, scrap electronics and even most of the hazardous waste and building rubble is recycled, while residual waste is sent to sorting centres where recyclable material is recovered and the residuals are burned.

The increase recorded in 2015 was due to the rebuild of Gratkorn Mill's liquor boiler. The fuel mix was altered during the rebuild, producing more ash for landfill. The reconstruction work itself also generated higher than normal waste.

Sappi Europe's **Eco-effective Stories**

o make sustainability a success, we involve our people. Our eco-effective stories feature what is being done by groups and individuals throughout the company to make a difference. The growing collection of stories is available to read on www.sappi.com.

































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