Sappi North America has been publicly reporting progress on sustainability initiatives since 2008 as part of a global sustainability report issued annually by Sappi Limited. This is the sixth consecutive year that each regional division will issue its own sustainability report, with consolidated global sustainability performance included in the annual report to shareholders. Sappi Limited will continue to publish a separate online report in conformance with the Global Reporting Initiative’s G4 framework and disclosing compliance with the United Nations Global Compact (UNGC), to which we are a signatory.

Covering FY 2016 (September 28, 2015, to September 25, 2016), this year’s report focuses on performance against goals and an update on key performance indicators. The report includes environmental performance data for Sappi’s three US manufacturing operations in Skowhegan, Maine, Westbrook, Maine, and Cloquet, Minnesota. Social responsibility and prosperity metrics are reported for the full region, including our corporate facilities, sales offices and sheeting facility in Allentown, Pennsylvania.

Copies of reports produced by Sappi Limited can be accessed at sappi.com/investors. Online access to sustainability reports from Sappi’s regional divisions in Europe and South Africa can be found at sappi.com/sustainability.
The success of our drive to adapt our business to the global megatrends that are reshaping the world around us is evident in our performance over the past year.

In terms of Prosperity, this translated into a 17.5 percent return on capital employed in 2016, and a dividend of US $0.11 for the year ended September 30—our first since 2008. In addition, we reduced debt significantly during the year and by US $800 million over the past three years. Our improved cash generation resulted in the group achieving the targeted leverage of less than two times net debt to our earnings before interest, taxes, depreciation and amortisation, earlier than expected.

We continued to position our product portfolios to meet the needs of our customers across the world, leverage the opportunities inherent in global trends and unlock the potential of forest-derived bioproducts. This was underpinned by the commissioning of our nanocellulose pilot plant in The Netherlands, together with the decision to build a second-generation sugar extraction demonstration plant in South Africa, which is due to come on stream in 2017, as well as the establishment of a dedicated Biotech division to consolidate and expand our renewable biomaterial offerings.

In terms of our People, our priority is a diverse, engaged workforce who understand the world of tomorrow so that we position ourselves to take advantage of future trends in order to grow and prosper. Accordingly, we continued to invest in our people so that we are able to create and seize opportunities, enable our people to grow intellectually and bring new ideas to fruition. We also continued to invest in the communities in which we operate, with a view to empowering them to reach their full potential through self-sustaining initiatives.

This strong financial performance provides a platform for growth.

The ongoing trajectory of urban growth around the globe is leading to growing concerns about natural resources and food security. To successfully navigate this trajectory, as One Sappi we need to continue treading more lightly on the Planet by progressively increasing our generation of renewable energy, enhancing our energy efficiency, reducing the amount of water used and solid waste generated, and promoting the use of certified fibre.

In addition to these efforts, we are working collaboratively with technology partners and industry bodies to develop more sustainable approaches to the task of balancing socio-economic growth and natural capital.

As we continue on our One Sappi journey towards our 2020Vision, it is important to safeguard our legacy and reputation. This means ensuring that all our people, customers, partners, communities, suppliers and other stakeholders know what we stand for, how we hope to achieve our vision and understand the principles that guide us along the way. Accordingly, our revised Code of Ethics sets out the expected behaviours that will help us stay true to who we are as we progress on our journey.

Steve Binnie
Chief Executive Officer
Sappi Limited
A Letter from
Mark Gardner

In 2016, Sappi North America achieved many important milestones as we continue to transform into a more diversified, sustainable business that meets the needs of our customers, communities, employees and shareholders. As part of the Sappi Limited group, our strong cash generation (EBITDA growth of 18 percent year over year), allowed us to reduce net debt by 20 percent year on year, and our robust balance sheet created a strong platform for growth and re-investment in 2017 and beyond.

In North America, we increased efficiencies and reduced waste across our operations, allowing us to be more nimble and consume fewer natural resources. We grew market share in our core coated paper business by focusing on service and reliability. We continued to diversify and strengthen our other businesses by introducing new technologies and products in our release business, launching new products in packaging, and meeting high standards for product consistency and performance for the dissolving wood pulp business.

I am proud of these accomplishments because they were the result of focus, planning, holding ourselves accountable and great execution by collaborative teams of employees. I know it is these same strengths that will provide the foundation for even greater success in the future as we continue to transform and diversify. Sappi has always risen to the challenge of change by being a forward-looking enterprise. Today our outlook for the future is positive. Our activities are driven by a spirit of cooperation and the energy and enthusiasm of resourceful people.

At Sappi, we are committed to the three P’s of sustainability—People, Planet, Prosperity—because we know that all three in balance create long-term business success and a workplace that attracts and retains the best employees.

People

Our focus on People starts with safety. Safety is not a choice, but is the responsibility of each and every employee; we can expect no less. We work hard every day to be sure that our leadership focus, our training programs, the maintenance and investment in the housekeeping and physical condition of our facilities all contributes to a strong culture of safety.

Our 2016 was a mixed year for safety performance. We have some work to do at Somerset and Westbrook, where Lost Time Incident Frequency Rates (LTIFR) rose. However, I am confident that our focus on working collaboratively with our unions coupled with an emphasis on incident reporting and early treatment of injuries will result in positive trends for 2017. Cloquet had an outstanding safety year with an LTIFR of 0.13. In fact, Cloquet employees surpassed One Million Work Hours Without a Lost Time Injury twice in the fiscal year, which is the kind of success that all of our sites are striving to achieve.

Sappi’s overall success reflects the knowledge, training and discipline of all our employees. In the coming years, many of our most experienced employees will be approaching retirement age, so it is more critical than ever that we continue to attract and
develop the right employees to lead Sappi for another generation. To that end, training is paramount, and I’m pleased that we exceeded our employee training goal in 2016.

Planet

Our industry-leading commitments on energy and waste reduction have proven that environmental and economic responsibilities go hand in hand. With a long-standing concerted effort to reduce our reliance on fossil fuels, our carbon footprint is the lowest among our domestic competitors. Our ongoing efforts in material waste reduction and energy efficiency provide savings to the business while reducing our reliance on natural resources. We are well ahead of our five-year goals for both energy and waste reduction. We will continue to drive improvements in these areas, fully expecting to exceed our goals. We are proud of the fact that our achievements have been recognized by The American Forest and Paper Association (energy reductions at Somerset) and by Johnson & Johnson (overall sustainability performance and commitments).

Prosperity

We have had two consecutive years of improved financial performance and achieved a Return on Net Operating Assets (RONOA) of five percent. While not yet at our 12 percent RONOA goal, we have made enormous strides in improving the financial sustainability of our North American businesses, achievements of which all of our employees can be proud. In accordance with our strategy, we implemented various projects which lowered our cost position and enhanced our competitiveness in the graphic paper segment. Furthermore, our initiatives to accelerate growth in specialty packaging have boosted volumes and diversified our business. In addition, we are continuing to seek opportunities to shift production from graphic paper to specialty packaging grades.

In recognition of our continued support in driving Maine’s economy forward, Sappi received a Champion of Economic Development Award from the Maine Development Foundation.

View for the future

Above all, the most important factor to becoming a truly sustainable business is having a well-formulated strategy. Sappi’s 2020Vision sets forth our plans for the future to grow and become a more diversified wood fiber company, earning re-investable returns with growth in new businesses and markets. With that common vision and purpose, I have full confidence in our continuing success.

Mark Gardner
President and CEO,
Sappi North America
Overview of Sappi North America

Sappi North America, headquartered in Boston, Massachusetts, with over 2,000 employees in the United States and Canada, is a subsidiary of Sappi Limited. Our three North American mills have the capacity to produce 1.16 million metric tons of paper and 855,000 metric tons of pulp. The success of our four diversified businesses is driven by strong customer relationships, world-class assets and outstanding products and services. Customers rely on Sappi to deliver products and services with consistently high quality and reliability supported by technical, operational and market expertise.

Pulp

Sappi North America is an integrated pulp and paper producer with state-of-the-art pulp mills. We produce bleached kraft pulp (Somerset Synergy®) and dissolving wood pulp (Specialised Cellulose) for sale to other manufacturers. With a 2013 conversion of the pulp mill at Cloquet, that mill is capable of producing 330,000 metric tons of dissolving pulp or 455,000 metric tons of bleached kraft pulp. To learn more, visit sappi.com/dissolving-wood-pulp or sappi.com/market-pulp.

Printing Papers

Our coated papers are specified for printing projects in which top-quality reproduction is essential, including corporate annual reports, fashion magazines, catalogs and fine art books. Sappi offers a broad selection of paper choices, including a range of bright white to neutral with a variety of finishes on varying basis weights in sheet and web. North American brands are: McCoy®, Opus®, Somerset® and Flo®. Our global brands include Magno, HannoArt and EuroArt Plus sheets, and the Galerie Publishing Papers, which include Galerie Fine, Galerie Silk, Galerie Brite and Galerie Lite web. To learn more, visit sappi.com/printing-papers.
Casting and Release Business

Sappi North America is also the world’s leading supplier of release papers for the automotive, fashion and engineered films industries, including the globally recognized Ultracast® brand. Our release papers provide the surface aesthetics for synthetic fabrics used in footwear, clothing, upholstery and accessories, as well as the textures for decorative laminates found in kitchens and baths and on flooring and other decorative surfaces. In 2016, we announced an exclusive worldwide license agreement with Sharklet Technologies and introduced Neoterix™ ST—texture—the first of its kind—designed to create surfaces that inhibit bacterial growth without the use of toxic additives or chemicals. To learn more, visit sappi.com/sappi-casting-release-paper.

Packaging and Specialty Papers

In 2014, Sappi North America established a separate business unit to focus on packaging and technical specialty papers. Domestically produced grades include our grease-resistant LusterPrint® designed for use with a wide variety of products such as pet food, popcorn, coffee and bakery products, and LusterCote®, a coated one-side (C1S) paper designed for labeling and other converting applications such as envelope, litho label and point of purchase displays. We also offer many specialty papers produced at our Alfeld Mill in Germany, including Algro Design, a solid bleached board used in folding carton applications and the Algro Sol line of clay-coated, silicone-based release papers. To learn more, visit sappi.com/packaging-and-speciality-papers.

Sappi Limited

Sappi Limited is headquartered in Johannesburg, South Africa, with over 12,000 employees and manufacturing operations in seven countries across three continents, as well as sales offices in more than 20 countries. Sappi is focused on providing dissolving wood pulp, paper and wood-based biomaterials to its direct and indirect customer base across the globe. Through three regional manufacturing divisions based in North America, Europe and South Africa, we produce approximately 5.4 million metric tons per year of paper, 2.3 million metric tons per year of paper pulp and 1.3 million metric tons per year of dissolving wood pulp. To learn more, visit sappi.com/group-profile.
In line with our 2020Vision, we are intentionally evolving Sappi to respond to global megatrends, including shifts in demographics, technology, climate, the drivers of the international economy and a carbon-constrained future. If we are to succeed in realising our vision, we recognise that we have to be agile enough to respond not just to changes in the business landscape, but also to the evolving needs of our people and the communities in which our operations are situated, as well as the challenges they face in dealing with a rapidly changing world. In addition, we need to respond to pressures on the natural resources on which our business depends, continuously striving to implement best environmental practice and keeping abreast of cutting-edge technologies.

By balancing People and Planet with Prosperity in this manner, we will maintain our position as a global forest products leader committed to collaborating and partnering with stakeholders—focused on being a trusted and sustainable organisation with an exciting future in woodfibre.

Valli Moosa
Chairman of the Social, Ethics, Transformation and Sustainability (SETS) Committee
Sappi Limited Board of Directors

Sustainability is not just a business philosophy at Sappi North America. It permeates our corporate structure with formal responsibilities, defined goals and accountability demanded from each of our four business units and every part of our operations.

To learn more about our sustainability governance, visit sappi.com/sustainability-governance.
Sappi North America Locations

- Headquarters
- Sites (3 Mills, 1 Sheeting Facility, 1 Service Center, Westbrook Technology Center)
- Sales Areas (17)
- Regional Distribution Centers (3)

Sustainability Council

Laura Thompson, Chair
Director, Sustainability and Policy Initiatives

Mary Buckelew
Senior Inside Sales Representative

Mellissa Johnson
Compensation and Employment Specialist

Kevin McCarthy
Senior Manager, Certification

Micki Meggison
Director, Technical Service and Process Improvement

Chuck Qualey
Senior Engineer

Rob Schilling
Environmental Manager

Dale Wibberly
Human Resources Manager
A Dialogue with Sappi North America’s Sustainability Leadership

We asked Jennifer and Laura to share their thoughts on emerging issues in sustainable business practices.

Jennifer Miller serves as Sappi’s Chief Business Sustainability Officer and is focused on identifying strategic growth and diversification opportunities for the company as well as leading the sustainability strategies for all four of Sappi North America’s businesses.

Laura Thompson, PhD, is Sappi’s Director of Sustainability and Policy Initiatives and leads Sappi North America’s cross-functional Sustainability Council in addition to serving as the regional representative to Sappi Limited’s Group Sustainability Council.

Q: Sappi North America has made a strategic commitment to forward-looking sustainability practices for nearly ten years. What do you see as the hallmarks of world-class sustainability practice?

JM: We find that much of what was important ten years ago is still critical. First and foremost, and we really focus on this at Sappi, is ownership from the very top of the organization, including the Board of Directors. Also critical is integrating all sustainability initiatives into the company’s regular capital, operating and strategic business plans, establishing forward-looking public goals and committing to transparent reporting of performance. We see the discipline we bring to sustainability translating to real value, building a corporate brand that stands for integrity, trust and thought leadership. A brand valued by employees, customers and shareholders alike.

LT: In fact, capturing insights from key stakeholder groups continues to be a key priority for us. Transparent and consistent reporting of sustainability performance is critical to all stakeholders, and their expectations are becoming more sophisticated and complex. Beyond our annual regional and global sustainability reports, we have many formats and forums for sharing performance information with our constituents, ranging from detailed instruments like the Carbon Disclosure Project and the Environmental Paper Assessment Tool (EPAT) to our recently relaunched corporate website where sustainability is represented as a core element of the site. We communicate at many levels to ensure that information is easily accessible to our many constituents.

Q: Companies are expected to disclose more details about their sustainability performance, including information about their supply chain. How is Sappi North America reacting to this trend?

JM: The challenge is to seek out scalable and balanced solutions that are consistent with our principles, e.g., to meet a legitimate and sincere customer need for information without disclosing proprietary information or creating confusion through a system of ad hoc responses to one-off requests. Again, we have found tools like EPAT to be helpful in consistently reporting environmental performance against key indicators, and we are now exploring other programs which could provide similar consistent frameworks for evaluating supply chain performance.

LT: We are very thoughtful in our approach. Data integrity is crucial, as is insuring that a tool or survey instrument is free from bias. We have purposely stayed away from scorecards that favor one certification program over another. We rely on reporting mechanisms like the Global Reporting Initiative standards, where there is industry-wide acceptance, and take a very fact-based and science-driven approach. Of course, the integrity of our internal reporting and governance structures provides a great deal of assurance to us that what we disclose is accurate and complete.

Q: That raises an interesting point. What is the importance of third-party verification in regards to the quality of data and management systems?

LT: Several of our management systems (like safety and quality) are certified by third parties. We also use multiple certification standards in support of our wood and fiber procurement policy. The SFI® Fiber Sourcing and FSC® Controlled Wood standards offer assurances of legality, traceability and the avoidance of controversial sources while the chain of custody standards help trace fiber from certified sources through the supply chain. Where data is not examined by third parties, we use our own resources. For example, a portion of our sustainability protocols and data are audited internally every year.
Q: As Sappi’s business continues to evolve and diversify, and new product offerings are launched every year, what challenges do you see in the realm of sustainability?

JM: Our strong governance and approach provides a solid foundation for all four business units. We have always taken a holistic view of issues, from responsible sourcing to understanding the end of life of our products. These are the principles that we follow whether we are talking about graphic papers for communication and design, dissolving pulp sold into textiles, packaging that is used in the food industry or specialty release papers sold for their microbiological suppression properties for use in hospitals and nursing homes.

LT: It is an exciting time! Diversification is providing us with opportunities to get to know new stakeholders which bring different perspectives to our industry. For example, within the textile supply chain there is a very high level of interest in social issues and material health. There is also a new set of tools that we are evaluating, like the Sustainable Apparel Coalition’s Higg Index, the leading sustainability assessment for the textile supply chain. This brings us back to the issue of scalability and the importance of collaboration. While many industries face similar issues, there has been a proliferation of redundant evaluation tools. However, the Outdoor Industry Association is working on two very important convergence projects—trying to find the common elements in various tools, like the social modules within Higg Index, Sedex and the SA 8000 social auditing standard. Aligning these mechanisms provides scalability, efficiency and consistency in reporting which ultimately leads to greater comprehension among stakeholders.

Q: The field of impact investment continues to grow. How do you see this shaping Sappi’s strategy?

JM: As a publicly held manufacturing company, we must recognize the ever growing importance of Environmental Social and Governance (ESG) ratings in the investment community. There are numerous signs that what used to be on the periphery is now mainstream, including Standard and Poor’s recent acquisition of Trucost. When one of the world’s foremost index providers acquires a leading firm in carbon accounting, environmental data and risk analysis, it sends a clear message about the importance of sustainability reporting.

LT: We are experiencing an evolution in how sustainability is viewed and valued by the investment community. In the ten years that I’ve worked in this field I have seen a shift in how ESG criteria are used. Initially investors used sustainability as a filtering mechanism to avoid certain stocks simply due to the nature of their business. Then ESG scores were used by investors to actively select stocks based on company sustainability performance. As its name suggests, with impact investing, some investors have expressed a willingness to forgo higher financial returns to support companies that make a positive and significant impact on society.

JM: At Sappi, we don’t believe you need to make a choice between financial return and a core commitment to sustainable development. We welcome the viewpoints of impact investors and index firms that take into account sustainability performance. As a wood products natural resource company diversifying into paper-based packaging, cellulose-based textiles and other biomaterials we are an attractive investment to those investors seeking alternatives to fossil-fuel-based materials. Everything we do, from our strong corporate culture of risk management, our commitment to listen and respond to the wide variety of customer needs, our focus and discipline in setting and achieving forward-looking goals—all will result in continued financial success and sustainability performance that will be recognized by investors, employees and customers alike.
Sustainability Goals

At Sappi North America, we are committed to operating our businesses in a sustainable manner. Together with the 2020Vision, Sappi’s global growth strategy, we use our sustainability goals program to set targets, initiate improvement actions and monitor progress.
People

Achieve Zero Workplace Injuries

Employee safety is a top priority at Sappi North America and is guided by our Project Zero initiative, which sets a goal of zero workplace safety incidents. Lost Time Injury Frequency Rate (LTIFR) is one important measure for tracking work-related incidents resulting in injuries that reduce an employee’s physical capabilities. It measures injuries resulting in lost time per one million work hours. In 2016, our overall performance declined compared to the baseline year, and we’ve redoubled our efforts to ensure that safe work habits are at the forefront of group communication and training. Congratulations to our employees at the Cloquet Mill for achieving the one million safe working hours milestone twice in the 2016 fiscal year, and bringing their site LTIFR to 0.13. Safety systems that include ongoing training and communications are ingrained in our work plans and viewed as integral in our efforts to consistently strive for zero workplace injuries. We focus our efforts on eliminating high hazard exposure, which could harm our employees and contractors. Each year, every employee, in every role, regularly participates in training sessions designed to raise awareness of safety practices that prevent injury.

Offer 60 Hours of Training and Education per Employee Annually

We believe that maintaining a skilled workforce is critical to achieving high performance in our complex manufacturing operations and business management systems. We continue our commitment to employee training and in 2016 we achieved an average 80 hours per employee, which is consistent with the prior year and ahead of our goal. As we are hiring new employees at high rates due to a large number of pending retirements, delivering ongoing training that effectively grows the skills of our employees is essential. We will continue to apply a high level of attention to ensure employees receive training that increases their skills and proficiency for their current position and for future growth.

Promote Employee Engagement

Each of the regions has agreed to set targets for two metrics measured in the Towers Watson employee engagement survey, which we undertake every two years. Using 2015 as the baseline year, we will track and work to increase performance of total survey participation and sustainable engagement as tracked in the Towers Watson survey. We measure levels of sustainable engagement by looking at employee rankings for a set of seven questions that cover a range of topics, including company goals, resources provided for employees to achieve high work performance, aspects that contribute to a productive work environment, and accomplishment and recognition. Our baseline and targets for these new goals are introduced in this report, and we aim to increase each metric by two percentage points each survey year. We’ve begun a number of actions to increase engagement across the range of our employee workforce, including supervisor training, an online learning platform, an enhanced onboarding process and broadened employee recognition systems. In addition, we recently rolled out a new corporate social responsibility program entitled Employee Ideas that Matter (EITM). Through this program, employees apply for grants to help benefit non-profit organizations in their local communities.

We will begin reporting progress against these goals in the 2017 Sustainability Report.
Prosperity

Achieve or Exceed 12 Percent Return on Net Operating Assets

Return on net operating assets (ROONA) is a core measure of the performance of our operations and the ability to effectively use our asset base to generate profit. Our 2016 result shows continuing improvement (compared to the two prior years) despite continued soft market conditions in some of Sappi’s North American core businesses in the areas of demand and import pressure. The improvement was driven by a combination of favorable raw material costs and strong performance in our dissolving wood pulp business. The increased flexibility we built into our manufacturing systems in 2013 continues to provide our operations personnel with more tools to manage the business. Our planned US $25 million upgrade in the Somerset woodyard is the next investment intended to grow and improve our manufacturing facilities. Our teams work hard to achieve increased operational efficiencies while closely managing both fixed and variable costs.

Planet

Achieve 60 Percent Total Certified Fiber Content¹

One hundred percent of our wood fiber is sourced from well-managed forests in accordance with the SFI® Certified Sourcing standard as well as the FSC® Controlled Wood standard. Building on the strong legal framework within the US, these standards offer additional assurances that there are no controversial sources in our wood basket.

We established a goal of 60 percent certified fiber. In 2014 we were purchasing the bulk of our kraft fiber for the Cloquet paper mill and achieved 66 percent, our highest level of certified fiber ever. Our performance against this goal is measured as percentage of certified forest fiber (from both the pulp we produce and that which we buy) in all our products across all three manufacturing sites and four business units. Our production strategy changed in 2015 due to market dynamics, and we produced more kraft pulp for our papermaking operations. As a result we achieved 54 percent certified fiber content in 2016, which has proven to be sufficient for meeting current customer demands. We continue to support and recognize the efforts of multiple, third-party certification programs, including the Forest Stewardship Council® (FSC®), the Sustainable Forestry Initiative® (SFI®) and the Programme for the Endorsement of Forest Certification (PEFC). We are also working to support a collaborative effort between the Sustainable Packaging Coalition and the American Forest Foundation to develop a landscape level assurance model focusing on small family-owned forests in the US.

¹ 2015 and 2016 reflect minor corrections to earlier reports of less than .5%
Reduce the Total Amount of Energy Expended in Making Each Ton of Product by Five Percent

Energy is an ongoing topic of concern globally, and is extremely important to Sappi and our stakeholder groups. The use of fossil fuels is linked to climate change and is a major cost driver in the wood products industry. We set a goal to reduce energy intensity by five percent in support of the global goal. Over 80 percent of the fuels we use to generate steam and power are renewable fuels. We continue to utilize over 70 percent renewable fuels to supply our internal energy needs, with the difference going to the sale of renewable energy credits (RECs) into the REC marketplace. Only a small fraction of our total energy needs is derived from electricity purchased from local power grids. In 2016, we achieved a 3.9 percent reduction in energy intensity as compared to the baseline, exceeding our target for this year. This performance was based on a combination of realizing benefits from some recent capital and process improvement projects and milder winter weather reducing heating costs for our northern US-based manufacturing facilities. A 2016 paper machine hood heat recovery project at Somerset is exceeding performance expectations and was selected by AF&PA for recognition with a Sustainability Award. Better control of the causticizing area at Somerset has led to more stable lime kiln operations and a reduction in fuel usage in the kiln. We remain committed to overall energy reduction and improving process efficiencies. Note: In accordance with industry standard methodology for tracking this goal, energy from purchased electricity is calculated in terms of fuel inputs to account for efficiency losses incurred in generating and transmitting power.

Reduce Raw Material Waste in Our Pulp and Paper Mills

Efficient use of raw materials brings multiple benefits in the form of front-end cost savings, reduced environmental impact and reduced costs associated with waste processing. Compared to a 2014 baseline, we track progress against separate goals for the pulping and papermaking process areas in order to better focus data collection and improvement plans for these complex systems. In our pulp mills we are targeting a 10 percent reduction in losses, whereas for the paper mills we established a five percent reduction goal. The lower target for the paper mill reduction efforts was a reflection of progress already achieved over the prior target established in 2011. Process losses are made up of fiber as well as pigments used as fillers in the base paper and coatings. We track these losses by measuring the amount of material in both pulp and paper mill process sewers before these streams enter our on-site treatment plants.

2014 was our best year ever recorded for paper mill losses. Our 2015 performance was negatively impacted as compared to 2014 by paper machine curtailment at both Somerset and Cloquet. This year we achieved outstanding results, overcoming the setback in 2015, and are now exceeding our overall five-year target ahead of schedule with a 5.8 percent reduction over baseline.

In 2015 we made significant reductions in the pulp mill losses compared to the 2014 baseline. This year the mills have reduced losses even further, achieving a total reduction of 13 percent over the baseline. We remain committed to sustaining these achievements as we continue to manage production of our different pulp products.
Economic Responsibility

Sustainable development is core to our business strategy. We balance daily operational focus, whether it be sourcing wood, identifying productivity improvements or fulfilling customer orders, with a long-term view for growth in core markets and expansion through investment in new markets.
“Sappi’s long-term commitment to Research and Development has been unwavering. We believe that customer-focused innovation in both our products and our processes is key to profitable, sustainable development. Globally, over 25 percent of our R&D spend is dedicated to our ‘Exciter’ program, which focuses on the development of breakthrough technology platforms.”

Beth Cormier
VP R&D, Innovation

Reflections on 2016
Financial Performance

Building on momentum established in 2014 and 2015, the Sappi Group delivered strong performance in 2016. Significantly, our profit for the year has nearly doubled to US $319 million and our earnings per share for the year increased by some 68 percent. Strong cash generation allowed us to reduce net debt by 20 percent year on year, achieving our debt reduction target earlier than anticipated.

In North America, in accordance with our strategy, we implemented various projects that lowered our cost position and enhanced our competitiveness in the graphic paper segment. Furthermore, our initiatives to accelerate growth in specialty packaging have boosted volumes and diversified our business. In addition, we are continuing to seek opportunities to shift production from graphic paper to various specialty packaging grades.

A Journey of Transformation

In 2015, Sappi Limited announced a new strategic vision to reshape our business through further diversification. Our transformation journey continues to be an intentional evolution of the business—changing to meet market needs and opportunities.

By 2020, we aim for the composition of our group EBITDA to be balanced such that 25 percent is derived from packaging and specialties, 25 percent from graphic papers, 40 percent from dissolving wood pulp, and 10 percent from new business opportunities such as nanocellulose, biorefinery products and energy.

In the realm of biorefinery products, this past year Sappi announced that it has entered into an agreement with leading global supplier Valmet for the construction of a second-generation sugar extraction demonstration plant. Through this venture we will be able to explore and optimize the extraction of biorenewable chemicals. Installed at our Ngodwanna Mill in South Africa, the demonstration plant is a precursor for Sappi to consider construction of commercial plants at its dissolving wood pulp mills, including our facility in Cloquet, Minnesota. The investment in biochemicals follows on the earlier investments in biocomposites, nanocellulose as well as Sappi’s expansion of lignosulphonate capacity. Visit our web site for more information at sappi.com/biomaterials.
Sappi is the world’s leading supplier of casting and release papers. Our papers create exciting and unique textures on the surface of other materials, including synthetic leathers, coated fabrics, unsupported films and decorative laminates. Release paper imparts both texture and gloss during the fabrication process and is then removed to reveal the textured surface. The resulting materials are incorporated into a wide variety of items, including furniture, shoes, handbags, apparel, automobile interiors, cabinets, countertops and much more!

1. Ultracast Process

To make Ultracast, we start with a base paper and apply a uniquely designed solvent-free liquid coating (1a). The coated paper is wrapped against a textured roll, enabling the coating to mold to every detail on the roll. The liquid coating is then instantly cured by using a high-energy electron beam, solidifying the coating while in contact with the roll (1b). This against roll cure process, invented and patented by Sappi, ensures 100 percent replication of the intended design.

2. Casting Process

The primary market for Ultracast is in applying textures to coated fabrics—sometimes referred to as synthetic leather. Our customers in this segment are referred to as casters. In this process, liquid resins are applied to the Ultracast paper, which imparts a variety of gloss levels or textures, and a fabric backing is added for strength (2a). Once the resin cures it is stripped from the Ultracast sheet and the paper is rewound to be used again and again (2b).
3. Decorative Laminates

Decorative laminates are made with a variety of press configurations such as double-belt or multi-opening presses, which serve to combine layers of resin-saturated paper under heat and pressure to form a solid laminate. In this process, several layers of brown “kraft” paper are combined with a coated, printed décor sheet and then the textured surface is applied with our paper. When used in a continuous process, our paper is rewound and used again (3a). In some press configurations, the paper is used just once but is considered a low-cost option when compared to making steel embossing plates. Common textures include wood grains, stippling or stone-like surfaces.

Continuous Double-Belt Press

Multi-opening Press

Neoterix® ST

Through a partnership with Sharklet Technologies Inc., we are taking Ultracast to an entirely new application space—instead of aesthetic textures, the patterns used are functional. While invisible to the human eye, the microscopic Sharklet™ texture imparts the unique ability to inhibit bacterial growth. On traditional antimicrobial surfaces, chemicals are used to kill bacteria. Using Neoterix ST, product manufacturers are able to create Sharklet™ textured surfaces which reduce microbial colonization and transfer by 90–95 percent, preventing propagation of microbes without the need for toxic chemicals. These textures can be applied to surfaces in health care environments and high-traffic public spaces (such as restrooms, subways, elevators, etc.) to reduce the potential spread of infection. While the Neoterix texture was inspired by biomimicry, Ultracast’s ability to replicate even microscopic textures at 100 percent fidelity provides the potential for many other functional applications such as water repellency, reflection and refraction of light.

The smallest feature of the Sharklet micropattern is 1/4 the size of a human red blood cell.
Sappi employees involved in Agenda2020

- Beth Cormier, VP R&D, Innovation
- Jim De Witt, Manager, Base Paper Development
- Bob Dorko, Manager, Utilities and Recovery
- Paul Duncker, Director, Coated Paper Development
- Chris Edgcumbe, Senior Engineer
- Dean Henrick, Senior Engineer
- Ray Hiltz, Pulping and Furnishing Manager
- Kirk Ross, Paper Machine Manager
- Darrell Waite, Associate Research Fellow

Agenda2020 Technology Alliance

Sappi has long been a supporter of the Agenda2020 Technology Alliance, a non-profit organization that exists to promote pre-competitive research on key technical challenges that face our industry. Working collaboratively with industry partners, universities and government agencies, the alliance has developed technology road maps in five areas:

- Reducing the use of fresh water
- Advancing drying technology on paper machines (reducing energy)
- Developing next-generation pulping (improving yield and selectivity)
- Reducing energy in the chemical recovery process (more efficient black liquor concentration)
- Advancing commercialization of cellulose nanomaterials

Each of these initiatives has clear ties to economic and environmental benefits through resource conservation (reducing water, materials and energy) or access to new markets. While some of these initiatives may take a decade or more to address, we believe that success in these areas has the potential to transform our industry.

Strategic Capital Investments

In addition to research, Sappi continues to invest strategic capital in our core businesses. In 2016 we announced a US $25 million capital project to modernize the woodyard at the Somerset Mill. This investment will allow the company to update the wood debarking, chipping and chip distribution systems. Specifically, upgrades will be made to the log infeed, debarker, chipper, chip transfer system, woodroom controls and bark handling. The commissioning of the new system will be complete in the first quarter of our 2018 fiscal year.

Economic Development Award

In 2016, Sappi received a Champion of Economic Development Award from the Maine Development Foundation. The award recognizes individuals or organizations that are key to driving Maine’s economy forward. Sappi directly employs over 1,300 citizens of Maine across four locations and also supports over 75 local organizations and school programs with volunteer efforts and financial contributions.

“Continually investing in our operations, processes and people ensures our success and maintains the Somerset Mill as a globally competitive site. This capital investment will improve reliability, reduce wood losses and costs as well as enhance efficiency gains through the increased production of wood chips.”

Mark Gardner
President and CEO
Applying a Pattern of Excellence

Imagine an innovation that reduces the accumulation of bacteria the moment germs hit a surface by 90–95 percent without the use of toxic chemicals that can lead to the development of resistant organisms. It may sound like something straight out of a science fiction novel, but it’s real—and Sappi paper helps make it possible.

In 2002, while researching a seemingly unrelated problem, materials science engineering professor Dr. Anthony Brennan noticed that algae and barnacles don’t attach to sharks the way they do other marine life. After further investigation, he discovered a microscopic surface pattern on the dermal denticles of sharkskin that prevents microorganisms from latching on. He wondered if he could recreate this pattern in a way that would yield similar results outside of the ocean. That’s how Sharklet™ microtexture was born.

This truly innovative micropattern is the first of its kind, one that reduces bacterial contamination at the point of contact without the use of toxic chemicals. However, while the possible applications seemed endless, one issue still remained: how to apply the texture to various surfaces.

Always on the lookout for the next industry-changing innovation, Sappi’s Casting and Release business stepped in, licensing the microtexture to create Neoterix™ ST. This groundbreaking product acts as a mold to transfer the texture to the desired surface, making it simple to apply to things like furniture, paneling and wall coverings, and helping to drastically minimize the aggregation of bacteria in places where germs tend to accumulate, such as hospitals, hotels, schools and offices.

Neoterix™ ST may prove particularly important in locations where traditional antimicrobials are being banned. “A year and a half ago, a major health care organization on the West Coast banned a list of 14 different antimicrobial solutions from its hospitals in the pursuit of providing healthier environments for their patients,” stated Michael Greene, a Senior Marketing Manager for Sappi’s Casting and Release business. “They’re either going to rely on standard cleaning practices or will need to look at other technologies. Neoterix™ ST is a great option, because it has no chemical additives or toxins.”

Sappi doesn’t plan to stop with Neoterix™ ST. After much experimentation to find the right way to apply the pattern to their release papers, opportunities to commercialize other microscopic textures surfaced. One of these is a pattern that refracts light, breaking it up into individual colors to create a rainbow effect. This light-refracting microtexture launched as an aesthetic texture, and it’s one that shoe companies have already shown particular interest in adopting thanks to the superb brilliance of the light effects in a fabric they already know how to use.
Environmental Responsibility

We approach environmental responsibility from a holistic perspective grounded in life cycle thinking—looking carefully at raw material use, energy generation, manufacturing and the end of life of our products. We work across the supply chain to drive change within our spheres of influence.
In the US, a strong legal framework has shaped and upheld responsible forestry practices for generations. State and federal laws cover rightful ownership, protect water quality and wildlife habitat, protect threatened and endangered species, regulate chemical use and provide for safe harvesting and fair labor practices.

Supply chain traceability protects landowners and minimizes the risk associated with illegally harvested timber. At Sappi we record the town and state or province of origin of each load of wood received at our mills. Representative samples of the deliveries to our mills are subsequently traced backward to confirm the accuracy of the information provided.

Through a separate effort, the State of Maine requires that all timber harvests must be registered with the Maine Forest Service, which periodically inspects the operation for environmental compliance. The State of Maine also requires the use of a “trip ticket” to accompany any wood transported to market. The trip ticket identifies the owner, the place of origin and the destination of the wood. A trip ticket system is also utilized in Minnesota, supported by a random sampling process that is incorporated into our certified sourcing procedures.

The Sappi Forestry Program assists forest landowners to meet their objectives for managing their woodland. The Lake States Forestry team works with landowners in the states of Minnesota, Wisconsin and Michigan’s Upper Peninsula to develop, manage and harvest their woodlands. The Maine Forestry program does the same for landowners in Maine.

Sappi’s trained foresters are able to develop a forest management plan geared to the interests of the landowner including wildlife management and aesthetics, marketing of timber to generate maximum return, and providing an extensive network of environmental and marketing resources. Our foresters embody a breadth of credentials founded on forestry education, professional experience and ongoing education. Their professionalism is tested through licensed examinations and proof of adherence to standards of practice. To learn more, visit sappi.com/forestry-sappi-north-america.

Sappi North America is committed to sourcing 100 percent of our wood and market kraft pulp from well-managed forests. We are members of the Sustainable Forestry Initiative® (SFI®) as well as the Forest Stewardship Council® (FSC®)—two of the world’s leading independent non-profit organizations that are responsible for developing sustainable forestry certification programs. With less than 10 percent of the world’s forests certified to a credible standard, we support inclusive policy positions based on multiple standards. We also hold Chain of Custody certificates for SFI®, FSC® and the Programme for Endorsement of Forest Certification (PEFC). All of our graphics and packaging paper products are sold with a Chain of Custody claim, which passes along an assurance of sourcing from well-managed forests.

Forest Legality and Traceability

Sappi Forestry Programs

Sustainable Forestry Certification

100% of our fiber is procured in accordance with the SFI® Fiber Sourcing standard as well as the FSC® Controlled Wood standard.
Celebrating Contributions of Family Forestland

Individual and family-owned land accounts for more than one-third of all land across the United States. These lands are owned by more than 22 million individual owners and the U.S. Forest Service estimates that more than half of the wood harvested for the wood products industry originates in family-owned forests. While these landowners may have management plans in place, in most cases there is no formal chain of custody certification to offer brand owners the supply chain assurances they seek. Therefore, through a partnership with the American Forest Foundation and the Sustainable Packaging Coalition, stakeholders across the supply chain have come together to understand challenges, and identify new methods to evaluate sustainable forest management on family-owned land. Development of a new data-driven assurance model will demonstrate how the practices and actions of landowners on individual parcels of land aggregate into a healthy forested landscape or regional ecosystem. The model could also be used to identify potential landscape-wide gaps and opportunities to enhance forest sustainability, and find practical ways for the supply chain to address them at a meaningful scale.

“Under the joint leadership of Laura Thompson of Sappi, and Rachel Goldstein of Mars Incorporated, we are working on an innovative assurance model that will ultimately drive conservation impacts in forestry. Our partnership with the Sustainable Packaging Coalition represents a unique collaboration of stakeholders from across the supply chain and offers tremendous opportunities for connecting conservation practices on family woodlands in the United States to the global marketplace.”

Sarah Crow
Senior Director of Certification, American Tree Farm System
American Forest Foundation
“Sappi’s Hood Heat Recovery Project at Somerset is a shining example of how improvements to industry infrastructure can benefit the environment as well as the bottom line.”

Donna Harman
President and CEO
American Forest & Paper Association

Energy & Emissions

In the US, the forest products industry continues to be the leading sector in the use of renewable energy. On average, nearly two-thirds of the industry’s total energy is derived from renewable resources. Most pulp and paper mills take advantage of the efficiencies of the cogeneration of steam and power, and in many cases, mills can sell electricity or renewable energy credits to help support local energy grids. And while we are proud of these facts, we also know that there is room for improvement in terms of total energy consumption. Other than wood fiber and chemicals, energy is our third largest expense related to papermaking. As such, we are steadfast in our efforts to reduce energy—providing savings to our operations while simultaneously reducing emissions.

Award-Winning Improvements

Continuous improvement is a core operating principle at Sappi, and each of our mills is constantly seeking opportunities for reducing energy. For example, this past year our Somerset Mill implemented projects related to efficient lighting within the paper mill as well as heat recovery in the paper drying process. These projects result in lower total energy use and operating costs, less fossil fuel usage, less purchased energy and a reduction in greenhouse gas emissions. In recognition of our efforts, the American Forest & Paper Association (AF&PA) awarded Sappi North America with the 2016 AF&PA Leadership in Sustainability Award for Energy Efficiency and Greenhouse Gas Reduction for the Hood Heat Recovery Project at the Somerset Mill.

US Total Energy Profile

| Source: US Energy Information Administration, eia.gov |

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<th>Renewable</th>
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<th>Purchased Power</th>
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Sustainable Materials Management

By applying life cycle thinking to materials management, businesses and municipalities are evolving from standard waste management practices to a more holistic approach. We are moving beyond the basic end-of-life tenets of the 3R’s (reduce, reuse, recycle) to embrace circular economy models or sustainable materials management. By looking across a product’s entire life cycle, we can discover new opportunities to conserve resources, reduce environmental impacts and lower costs.

At Sappi, we constantly seek opportunities to maximize the value of industrial by-products. Working across industries, we consume construction and demolition wood at our Westbrook facility and tire-derived fuel at our Somerset Mill. By utilizing these sources as alternative fuels, we keep the materials out of landfills while displacing the need for virgin fossil fuels and lower the mills’ energy costs.

We also seek to find the best use of our own by-products. For example our Cloquet Mill has had a long-standing relationship with the University of Minnesota Extension Service. Thanks to this partnership, boiler ash and lime mud are diverted from landfill and put to beneficial use as a soil amendment. The alkaline pH of these materials helps adjust the pH of crop soil and allows for better absorption of nutrients—ultimately resulting in better yield of alfalfa used in dairy farming.

Supporting Renewable Energy Standards

In the US, 29 states plus Washington, DC and two territories have adopted policies (the Renewable Portfolio Standard, or RPS) that reduce carbon emissions from electricity generation by requiring that utilities generate a specified share of power from renewable sources. The state of Maine has an effective renewable portfolio standard target: Starting at 30 percent renewable energy in 2007, the Maine standard requires an additional one percent per year to reach a target of 40 percent by 2017. Renewable Energy Certificates (RECs) are tradable environmental commodities that represent proof that one megawatt-hour (MWh) of electricity was generated from a renewable energy resource.

Our Westbrook facility has met the requirements of Maine Class I RECs based on the combustion of biomass and construction and demolition wood. Our Somerset Mill also qualifies for selling RECs based on black liquor combustion. As such, we are eligible to sell RECs from both mills to support the renewable portfolio standards in Maine.

For reporting purposes, we deduct the amount of renewable energy sold as RECs from Sappi’s renewable energy consumption figures in the production of our own products. As a result, our energy generation figures show higher levels of renewable energy than our consumption figures. And because we have increased the sales of RECs in recent years from our Somerset Mill, our own consumption shows a downward trend. Sappi’s overall energy profile and additional energy indicators can be found on p. 40.
Building Reverse Supply Chains

Recycling is a key aspect of the circular economy—treating all materials, including by-products, as valuable resources rather than wastes. It is especially important to recover paper and other organic materials to avoid the generation of methane emissions in landfills. All of our graphics and packaging papers are recyclable, and we are strong proponents of educational outreach and programs that lead to the higher recovery of paper and other recyclable materials.

In 2015 Sappi became a supporter, with publishers, catalogers and other paper companies, of Recycling Works in Publishing (RWIP). RWIP is a member of The Recycling Partnership, a national non-profit working to transform recycling across the US. Laura Thompson, Director of Sustainable Development and Global Policy Initiatives for Sappi North America has been elected by members of RWIP to represent the coalition.

The Recycling Partnership has a proven track record that utilizes public-private partnerships to improve recycling at the local level by providing grants, technical support and educational programming to make recycling programs more accessible and more efficient (reducing contamination). In 2016, the partnership worked directly with over 200 communities, placed nearly 300,000 recycling carts (replacing bins), and has reached over 8 million households through a combination of open source downloads, technical assistance with municipalities, quality-focused research and grant partnerships.

We are proud to partner with an organization that is getting results on the ground. For more information visit recyclingpartnership.org.

A Systems Dynamics Approach

Some organizations have a tendency to over-simplify the use of recycled content and may suggest that higher levels of recycled fiber are always better for the environment, regardless of the application. At Sappi, we have long promoted a concept that we refer to as the “best use” of recycled fiber. Because recovered fiber can be used in so many paper-based products, it is important to understand how increasing the recycled content in one grade will affect the system-wide fiber availability for other grades, potentially sub-optimizing the effective use of recovered fiber across the system.

Our trade association, American Forest and Paper Association (AF&PA), is collaborating with the Massachusetts Institute of Technology (MIT) to develop a new approach for a more comprehensive understanding of the tradeoffs of changes in recovered fiber utilization. The MIT methodology applies a “systems dynamics” approach to consequential life cycle assessment for US paper production to model the system-wide effects. The project will deliver a comprehensive model to better educate policy makers and customers to make informed decisions about shifts in recovery rate and recycled content. Sappi personnel have worked alongside other stakeholders as members of a Technical Advisory Group and participants in several workshops to help define systems variables and interactions.

“Sappi has been a great contributor to the systems modeling effort. From hosting a mill tour for the MIT team, to participating in workshops and advisory committee meetings, we have really appreciated their support.”

Dr. Elsa Olivetti

Assistant Professor of Materials Science and Engineering

Massachusetts Institute of Technology
Bill Randall is working hard to sustain the 400-acre family farm he inherited from his father. “A village idiot can have anything given to him. It takes a genius to keep it,” Bill jokes. The Sappi Forestry program is helping Bill manage the land for the long term.

Bill’s farm includes approximately 300 acres of woodlands that he has been managing with the help of the Sappi Forestry team for about 10 years. This year he worked with two of Sappi’s foresters, Bryan Savoy and Julie Davenport, on a 95-acre selective harvest. He says that the Sappi team is good about watching the markets for him, and “they cut what you want cut and leave what you want left.” Bill says that since he started managing his land under Sappi’s Forestry Program, “the woodlot is growing more logs now, the forest is cleaner, and the light can get right to the ground.”

Bill was raised on the farm, which his family started in 1871. The farm has been in the family for all but 15 years since then. Bill helped his father run a profitable dairy operation for many years, but sold his dairy herd a few years ago. He says that it is difficult for a small farm to compete with larger, more mechanized dairy farms. Whether talking about the dairy industry or his woodlot, Bill says, “it is all about sustainability.” Bill has worked for 25 years for Cabot Cooperative, helping dairy farmers to ensure that their milk meets strict quality control standards. He sees his job with Cabot not as being a quality control specialist, but as keeping the dairy farms he works with and the company he works for sustainable.

“The dairy industry is a lot like the forest products and paper industry,” Bill notes. “Both make commodity products. The price for the product is highly influenced by factors not in the control of the farmer, landowner or mill owner. Dairy farming and logging are natural resource-based industries that have been around for years, but to be sustainable in today’s market requires large investments in equipment and a thorough
knowledge of best practices and scientific principles.”

Bill compares improvements and mechanization in the dairy industry to the harvesting on his woodlot, being done by Delbert Franklin and his daughter, Megan Smith, of Franklin Forest Products. He says that mechanized milking equipment, though very expensive to install, allows the production of milk at a lower cost with fewer quality issues. Using a mechanical harvester Delbert and Megan are able to cut just the trees that should be harvested with minimal impact on soil and the remaining forest stand.

Managing his woodlot with the Sappi Forestry program enhances tree growth, and produces a healthy forest which supports water, air and soil quality, wildlife habitat and many other values for future generations. Bill is using a portion of the income to restore the farmhouse on the property where he grew up. Forest management is keeping Bill Randall’s farm sustainable.

“Dairy farming and logging are natural resource-based industries that have been around for years, but to be sustainable in today’s market requires large investments in equipment and a thorough knowledge of best practices and scientific principles.”

Bill Randall
Social Responsibility

Our social responsibility efforts focus on our employees, customers and our local communities. We engage with customers to create relevant and innovative products. Across our operations, we focus on the safety, well-being and expertise of our employees, and we routinely work to connect and contribute in our local communities.
Safety

We have established a global goal of zero workplace incidents consistent with “Project Zero” and our overall safety program. In 2016 the Lost Time Incident Frequency Rate (LTIFR) was 0.69, which is higher than our 2014 benchmark. Unfortunately, multiple incidents have occurred at both the Westbrook and Somerset mills. The Technology Center, Boston office and South Portland office, however, all had zero LTIFR, and the Cloquet Mill continues to demonstrate outstanding performance, ending the year with an LTIFR of 0.13. Cloquet employees surpassed One Million Work Hours Without a Lost Time Injury twice in the fiscal year.

A redoubled focus on increasing awareness through daily safety communications is ongoing. Critical safe behaviors have been defined with front-line leaders providing observations and corrective feedback. At Somerset, union and management leadership are meeting regularly and working collaboratively to drive safety improvements. We have revisited our Cardinal Safety Rules and emphasized incident reporting and early treatment with the objective of severity reduction. Regular meetings are taking place with involvement of senior mill leadership across each area of operations. In addition, the new employee safety orientation has been streamlined and updated to include the SafeStart skill building program for all employees.

Employee Engagement Efforts

In response to the results of a comprehensive employee engagement survey in 2015, the company has undertaken a number of initiatives, including the launching of a peer recognition program and a number of mill-specific projects to increase employee engagement at the hourly level, including supervisor training, an on-line learning platform and an enhanced on-boarding process.

PEER Recognition: The TOUTS System

It is well understood that beyond getting recognition from upper management, employees welcome acknowledgment from their peers. Unfortunately, with a keen eye on getting “work done,” we all too often miss opportunities to provide recognition when it is due. With these concepts in mind, Sappi developed an online recognition system where employees can easily offer appreciation and provide positive feedback to each other. Employees can choose to nominate their peers in one of the following categories:

• Team Player—works well across departments/sites/levels with collaboration and integrity
• Outstanding performance on work assignment, project or event performed in a timely, well-planned manner
• Unique involvement in the community and volunteerism
• Taking Risk, and practicing Ingenuity and Innovation through courage and smart decision making
• Safety/Sustainability—Exemplifies excellence in safety practices, behavior or safety mentoring, and/or significant contribution to sustainability through interactions with People and Planet helping Sappi to achieve Prosperity

In just three quarters of 2016, employees delivered over 2,000 TOUTS recognizing, appreciating, honoring and thanking their colleagues. An additional benefit is that the manager of both the employee originating the TOUT and receiving the TOUT get notified and will often offer additional messages in person or via email. With that additional layer, employee recognition has increased significantly.
Code of Ethics

As a global company operating in many countries and jurisdictions, it is essential that we conduct Sappi business in a coherent, consistent and, most importantly, ethical way. In line with our 2020Vision strategy and with our commitment to being a responsible corporate citizen, we have updated our Code of Ethics.

The updated Code launched in the summer of 2016. The principles and behaviors discussed in the Code of Ethics are supported by relevant examples, making it easier to understand than ever before. The Code is central to our success and reputation. Meeting our goal of growing Sappi into a more profitable, diversified wood-fiber group depends on our ongoing commitment to responsible business principles across the group.

The principles embodied in the Code apply to all our stakeholders, from members of the board to our suppliers. Each day we encourage employees to live our core values of doing business with integrity and courage and making smart decisions, which we execute with speed.

The Code of Ethics is also made available in a variety of languages and is available online at sappi.com/sappi-code-of-ethics.

Customer Council

The Sustainability Customer Council is made up of eight Sappi customers, representing key customer segments of the coated business, printers, publishers, corporate paper buyers and graphic designers along with representatives from our release papers and packaging businesses. In semiannual meetings, the Council provides valuable input on emerging issues and weighs in on how customer needs may impact collaborative efforts and our sustainability communications plan. In 2017 we will be seeking customer representation from the dissolving wood pulp business. Kathy Fernstrom, Key Accounts Manager in our Publishing Sales Group, chairs the Council.
Sappi North America Helps Give a Voice to Underserved Students

To celebrate student writing and help bring 826 National’s programs to life in print, Sunra Thompson, an Art Director at McSweeney’s publishing house, conceived the idea for the organization’s first-ever anthology of student work. Stories would be collected from the organization’s seven chapters across the United States and organized into themed sections that draw from student experiences over a range of topics—from the reality of gang violence and racial prejudice to tender and revealing moments of family life. Color illustrations would be used to enhance the tales.

Since 826 National is also concerned with supporting educators and connecting with communities, the final sections of the anthology planned to feature lesson plans as well as vignettes about how each 826 National chapter came to be and snapshots about the community it serves.

Before Thompson could make this anthology into a reality, he needed support. He applied for Sappi’s Ideas that Matter grant, which awards money to those who use design as a driving force to make a difference, and his efforts were rewarded in the form of US $20,900.

When the project is complete, 826 National will have an expertly designed piece that empowers underserved students, encourages educators and amplifies the work being done in the communities it serves.

Award-winning non-profit 826 believes that strong writing skills are fundamental to future success. The organization, founded in 2002 by celebrated author Dave Eggers and acclaimed educator Nínive Calegari, provides under-resourced students ages six to 18 with opportunities to explore their creativity and improve their writing skills through free programs hosted both in the classroom and after school.
Sappi understands the importance of creating innovative solutions that meet evolving customer needs. Our future success depends on listening to, communicating with and responding to our customers. From award-winning marketing collateral to sophisticated approaches to customer collaboration and product development, Sappi stands apart.

McCoy celebrates 20 years

Twenty years ago, Sappi’s Cloquet Mill presented McCoy as the best of the best paper—against which all others would be judged, and that promise continues to hold true today. To help celebrate the anniversary of this extraordinary paper, we produced a set of cards that customers can use to build customized structures, somewhat reminiscent of the way many of the world’s most beloved companies build their brands using McCoy. In a clever way, each card positions McCoy as the ideal paper for creatives who value the details, reinforcing paper choice as a key ingredient to great design.

Neuroscience of Touch

Sappi North America received the Positively Print award, co-sponsored by the Graphic Arts Show Company (GASC) and Two Sides North America, for its 2015 promotion, Haptic Brain, Haptic Brand: A Communicator’s Guide to the Neuroscience of Touch.

The Positively Print award is given to the individual, company or organization that develops a program or ad campaign that best illustrates the strengths, sustainability and value of print as a marketing medium. Our campaign included a book printed on McCoy, six video shorts, a microsite and live events featuring Dr. David Eagleman, a leading neuroscientist and haptics specialist.

“Sappi has long emphasized the science behind how media affects communication,” said Deece Hannigan, Vice President of Sappi North America’s Coated and Packaging Business. “The scientific exploration on this project was conducted by Dr. David Eagleman, who extensively researched how different media shapes perception, and more specifically, how our sense of touch impacts our experience with corporate communications and brands. With his studies, Dr. Eagleman broke new ground, finding that paper quality significantly affects viewer response.”

Specialised Cellulose

A truly sustainable raw material, dissolving wood pulp is noted for its versatility. End use applications include textiles used in high-end fashion, bio-based plastics and other specialty products. We’re innovators in this market, capitalizing on years of experience to create customized solutions across multiple sectors. Sappi’s global sales and marketing team has intimate customer connections with world-leading companies.
Holiday Kit on Opus

Sappi North America was named a 2016 PPI Award winner in its “Bringing Paper to Life—Innovative Printing & Writing Campaign of the Year” category for our 2015 Holiday Kit. The kit contained a holiday-themed gift box, bag, wrapping paper, cards and tags, all printed on Opus. More than a great example of Opus’ many applications, the kit also leveraged the science of touch to trigger a connection between the Sappi brand and the recipient, proving paper’s ability to deliver a truly memorable customer experience. To complete the sensory experience, the wrapping paper component utilized coating techniques to replicate the scent of cinnamon and peppermint.

Rainbow and Charm

Our newest Rainbow and Charm release textures feature a unique, built-in micropattern that, without the use of extra additives or coatings, creates a colorful, holographic effect when light reflects off it. Unlike others on the market, our product won’t crack because it doesn’t use foil to achieve the look.

Thanks to its sensational style and magnetic appeal, these new developments—among the most diverse textures Sappi offers—are getting people excited. And because they’ll look stunning on sport shoes, apparel and accessories, technology products, handbags, luggage and even laminate surfaces, the possible applications are nearly endless.

Sappi.com

Sappi’s new website unites all of our business units on a single global platform.

No matter what stakeholders come to the site searching for—product specifications, the latest Sustainability Reports, global updates, educational resources or investor content—the new website will help them find it faster.

Advancements in Packaging

McCoy Gift Card and LusterCote

Sappi saw two advancements in its packaging grades this year in North America. First was the expansion of its LusterCote product line to include heavyweight options. This update provides press operators, brand owners and graphic designers with superior performance on a wide range of coated one-side (C1S) applications, including litho labels, envelopes, book dust jackets, set-up boxes and point-of-purchase displays, and now, banderole. This expansion complements the 55 and 60lb grades that were introduced the previous year, primarily targeting the cut & stack label market.

The second advancement was the introduction of the McCoy Gift Card 28pt to its McCoy line in North America. Our corporate customers can now ensure brand consistency throughout all marketing efforts by using the entire McCoy paper line for all of their printing needs. McCoy gift cards offer effortless design defined by the details, durability for daily use and production using renewable resources that help reduce environmental impact.
Corporate Philanthropy

Philanthropy has always been seen as an element of corporate social responsibility. Long before we started talking about sustainability and the three P’s (People, Planet and Prosperity), we have been doing our part through a variety of corporate sponsorship programs. In addition to United Way contributions, each of the mills has a Community Connections group and a structured way to make contributions to local community programs such as the Mission Possible Teen Center in Westbrook, the Lake Superior Zoo in Duluth, Codman Academy in Boston, and the Maine Home for Little Wanderers in Waterville, just to name a few of the many and varied programs we have supported over the years.

More than 15 years ago, Sappi launched Ideas that Matter, a competition-based grant program, to recognize and support the graphic designers who use their skills and expertise to demonstrate the power of print in support of a wide range of charitable activities. Established as a global Sappi initiative in 1999, Sappi has funded over 500 projects contributing millions of dollars to worldwide causes that enhance our lives and our planet.

As our sustainability strategy has evolved, so has our outlook on corporate philanthropy. Our policy on social responsibility is intended to steer us toward more strategic use of our giving. In other words, we want to create partnerships with mutual benefits to the community and to our businesses.

We recognize that we have a major economic impact where most of our mills are located. With this in mind, our focus for philanthropy continues to shift away from national or global initiatives to focus more on our local communities. We encourage projects that foster collaboration and opportunities for employee participation. Put more simply, rather than simply writing checks, we want to turn ideas into action and demonstrate our support in the communities where we live and work. In recognition of the strong volunteer spirit of many of our employees we are excited to be launching our new Employee Ideas that Matter program (EITM). Building on the legacy of the customer facing program, EITM will provide funding for non-profit organizations directly supported by our employees.

In 2016 our contributions came to a total of US $1.7 million through a combination of cash donations to local community organizations and corporate sponsorships, our Ideas that Matter program and in kind contributions (a combination of paper donations, steam donated to the Westbrook hospital and the value of the beneficial use program in Cloquet).

2016 Total Contributions

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<th>ITM</th>
<th>Cash</th>
<th>In Kind</th>
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<tbody>
<tr>
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2016 Total Contributions

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Sappi and the Fond du Lac Tribal and Community College have received a US $350,000 grant from the Minnesota Job Skills Partnership (MJSP) to develop and implement a Knowledge Management and Training System at Sappi’s Cloquet Mill in Minnesota.

The proposed system will house Sappi’s impressive knowledge base in a way that is accessible and actionable for all employees. The computerized, user-friendly system will be used to identify, document and transfer employees’ knowledge so that critical information can not only be shared for the betterment of all Sappi’s Minnesota employees, but unique, experiential information can be passed on from retiring generations of workers to new ones. It will provide self-directed training and assist in succession planning and job task certifications.

The development of the program will begin with individual interviews with each of the Cloquet Mill’s 538 hourly employees.

“The new Knowledge Management and Training System will help ensure that our current and future employees in Minnesota have the opportunity to continually increase their knowledge and advance their careers using the hard-earned experience from our more seasoned employees. Our retiring workforce’s experiential knowledge is invaluable, and with the generous support of Fond du Lac Tribal and Community College, this solution will allow us to become an even bigger part of the Minnesota community.”

Mike Schultz
Managing Director
Sappi Cloquet Mill
Fifty Sappi employees volunteer to staff the Somerset Emergency Response Team (ERT). The team is trained and prepared to respond to potential in-house emergency situations such as fires, medical issues, fall and confined space rescues, or chemical releases. The ERT also responds offsite with a team from Skowhegan Fire, Waterville Fire and Augusta Fire (Team V) if activated by the Somerset County EMA director.

Members of the Somerset ERT include employees with various responsibilities across the mill including security guards, maintenance employees, paper mill operators, pulp mill and utilities operators and four salaried employees. Skip Pratt is the Chief Administrative Officer.

The team has elected officers who meet each month to discuss issues and improvements to the ERT. Training is done twice each month in order to accommodate the schedules of our shift workers. In addition to monthly training sessions, a surprise Mini Drill is conducted to evaluate the team’s response to an emergency.

Each year the Maine Emergency Management Agency holds a two-day Preparedness Conference in Augusta, the capital city. They sponsor a Team Challenge, which tests the skills and knowledge of six to nine participating teams from around the state. Sappi Somerset has won this challenge several times in recent years, taking first place in 2012, 2013 and 2014, and second place in 2015.

Mark Barnes, lead sustainability ambassador for Somerset, praised the work of the ERT, noting that he feels a sense of security at the mill knowing that we have such well-trained first responder teams in place. While the team is not called into action very often, when they do get a call the response is handled with pride and expertise.

“"I volunteer my time to the team because I believe in teamwork, dedication and commitment. We help to protect our communities from the hazards that move through them and work with our town’s fire department.”

Les Flannery
Deputy Chief, Emergency Response Team
Johnson & Johnson Rising Star Award

Sappi North America was a proud recipient of the Johnson & Johnson 2015 Rising Star Sustainability Award. The award comes after Sappi helped the company create and implement Johnson & Johnson’s US Commercial Paper Program.

Johnson & Johnson holds those they do business with to high standards. For this reason, they work to help their suppliers reduce the environmental impact of their operations. We partnered with the multinational manufacturer to help them better understand the key environmental issues related to paper—everything from responsible forestry and certification to understanding manufacturing matters like renewable energy and emissions to end-of-life-cycle issues.

Over the course of several years and a series of consultations that included webinars, in-person meetings and a hosted visit to our Somerset Mill that involved a forestry tour, we helped Johnson & Johnson develop an environmentally responsible paper procurement program that keeps with their business philosophy.

For Sappi, the effort culminated with a special ceremony hosted at the Johnson & Johnson headquarters, where we accepted the award. “Johnson & Johnson has thousands of suppliers, but gave only ten awards,” said Stephanie Theriot, Regional Sales Manager for Sappi in the North East. “I am proud of the value Sappi brought to helping the company further their sustainability goals and objectives.”

“Johnson & Johnson has thousands of suppliers, but gave only ten awards. I am proud of the value Sappi brought to helping the company further their sustainability goals and objectives.”

Stephanie Theriot
North East Regional Sales Manager
Our pulp and paper products are derived from renewable resources, made with high levels of renewable energy, and are designed to be reused or recycled. While it is difficult to identify a more sustainable industry than forest products, not all companies perform equally when it comes to operating safely and sustainably. We track our progress annually, and in the following pages offer an updated view of our performance in important areas of environmental and social responsibility. We monitor key metrics for fiber, emissions, energy usage and the impact of our operations on air, water and solid waste. We use this data when setting improvement goals related either to our operations or our interactions with our key stakeholder groups—employees, customers and our local communities. We uphold the principles of the Universal Declaration of Human Rights, a United Nations declaration that establishes the global foundation for the protection of basic human rights such as freedom of association and prohibitions on forced labor.
Energy

Energy intensity, or the total energy consumed to produce a set unit of product, is a key focus of our monitoring and improvement work. Engineers manage fuel usage in the steam and power generation systems at each of our mills to optimize production and cost efficiencies and work to achieve our current five-year goal to reduce energy consumption per ton of product by five percent. The energy profiles of our Westbrook and Somerset Mills reflect sales of Renewable Energy Credits (RECs). The reduction in renewable energy consumption is a reflection of REC sales as well as increased use of natural gas and purchased power. We will continue making efficiency improvements using project opportunities identified by our production engineers.

Note: Analysis of our energy use employs a calculation method also used by the Department of Energy and the AF&PA. In this method, energy consumption from purchased electricity is calculated in terms of fuel inputs to account for different fuel efficiencies during power generation and efficiency losses during power transmission.
Sappi North America Energy Intensity (GJ/admt<sup>a</sup>)

- 2012: 27.8
- 2013: 28.5
- 2014: 28.0
- 2015: 27.9
- 2016: 26.9

Consumption of Alternate Fuels (TJ/yr)

- 2012: 1,725
- 2013: 1,758
- 2014: 1,769
- 2015: 1,508
- 2016: 1,115

Percent of Renewable Energy

- 2012: 83.7%
- 2013: 80.5%
- 2014: 76.5%
- 2015: 72.3%
- 2016: 71.5%

2016 Westbrook Mill Total Energy

- 72.5% Renewable
- 24.7% Coal
- 1.0% Fuel Oil
- 1.6% Natural Gas
- 0.1% Purchased Electricity

Intensity metrics reflect the impact per air-dried metric ton of saleable product (including market pulp).
Fiber

One hundred percent of our fiber is procured in accordance with the SFI® Fiber Sourcing standard as well as the FSC® Controlled Wood standard. These third-party programs provide assurance that wood-based products have been procured from well-managed forests and are legally harvested. While Sappi does not own any forestland in North America, our foresters provide active forest management services for landowners within our procurement zones. We continue to support and recognize the efforts of multiple third-party certification programs, including the Forest Stewardship Council®, the Sustainable Forestry Initiative®, the Programme for the Endorsement of Forest Certification (PEFC) and the American Tree Farm System, a PEFC-endorsed certification program. The Point of Harvest certified fiber refers to wood fiber harvested from lands not otherwise certified by one of the forest management standards but is harvested by logging professionals who are trained and certified in practices designed to conserve forestland. All recycled fiber (RF) is sourced from producers within North America and the deinked pulp is processed chlorine-free. All kraft pulp is elemental chlorine-free (ECF).

The SFI® and FSC® certification programs have modified their standards to include post-industrial fiber (PIF) as part of their claim and labeling schemes. In considering this change, FSC® published a comprehensive study where they concluded that restricting claims to only post-consumer fiber was creating an uneven playing field in global markets and was actually distorting consumers’ perception of the value of recycled fiber. In October of 2016, we began utilizing PIF as part of the 10 percent recycled content in Flo sheets.

2016 Total Fiber Sourcing

One hundred percent of our fiber is procured in accordance with the SFI® Fiber Sourcing standard as well as the FSC® Controlled Wood standard.

2016 Total Fiber Certification

Certified Fiber

- 54.4%
- 16.7% FSC®/SFI®/PEFC
- 15.8% FSC®
- 16.9% SFI®/PEFC
- 5.0% Point of Harvest

Purchased Kraft Fiber

- 12.8%

Recycled Fiber

- 2.0%

Own Made Fiber

- 85.2%
Emissions

Sappi North America continues to operate well below permitted emissions levels associated with on-site energy production in the combined heat and power plants at our Cloquet, Somerset and Westbrook mills. Particulate, greenhouse gas and SO₂ emissions are all lower as compared to 2015, primarily driven by reduction in coal firing at our Westbrook Mill.

Particulate Emissions (kg/admt*)

GHG Emissions (tonne CO₂/admt*)

2016 GHG Emissions by Mill (1K tonne CO₂)

SO₂ Emissions (kg/admt*)

NOₓ Emissions (kg/admt*)

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a Intensity metrics reflect the impact per air-dried metric ton of saleable product (including market pulp).

b Direct GHG emissions—emissions from sources that the company owns or controls.

c Indirect GHG emissions from purchased electricity, steam or heat—emissions associated with the generation of electricity, steam or heat.
Water

All pulp and paper mills in North America use and treat water in accordance with comprehensive environmental permits. Overall, Sappi North America’s 2016 water use, total suspended solids and biological oxygen demand intensity metrics were in line with our 2015 performance. Our North American mills draw water from surface sources (rivers and lakes) and return treated water to the same primary sources. After on-site treatment at Cloquet, we send water to a publicly owned treatment facility, where it is treated further and then returned to Lake Superior. Our total water consumption is low because we return a high percentage of the water we use. Water that is “consumed” in our operations is primarily water lost to the environment due to evaporation in the paper drying process and a small amount of moisture contained in our finished products.

Water Intake and Discharge

Biological Oxygen Demand

Total Suspended Solids

Intensity metrics reflect the impact per air-dried metric ton of saleable product (including market pulp).
Managing our solid waste and finding ways to minimize waste to landfill remains a focus at all Sappi’s North American mills. In 2016, we reduced total solid waste to landfill through pulp mill and paper mill raw material waste reduction projects at all three mills and we generated lower levels of boiler ash due to reductions in biomass combustion at our Somerset and Westbrook Mills. We continue to work with local farmers who value our beneficial use of solid waste program. This provides them the ability to use boiler ash and lime mud as soil amendments for managing soil pH, which improves growing conditions for certain crops. Downtime associated with the capital improvement project on the lime kiln at our Cloquet Mill caused the significant increase in the beneficial use of these two solid wastes in 2016. We anticipate a return to more historic levels in this program going forward.

### Total Solid Waste to Landfill (kg/admt\(^a\))

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>59.7</td>
<td>53.8</td>
<td>64.1</td>
<td>62.0</td>
<td>39.5</td>
</tr>
</tbody>
</table>

### Beneficial Use of Solid Waste (tonne/yr)

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>29,080</td>
<td>37,644</td>
<td>48,021</td>
<td>50,716</td>
<td>84,107</td>
</tr>
</tbody>
</table>

*a Intensity metrics reflect the impact per air-dried metric ton of saleable product (including market pulp).*
Social Indicators

Sappi takes a very active approach to social responsibility both regionally and globally, driving key initiatives in support of our three primary stakeholder groups: employees, customers and the local communities in which we operate. In addition to providing skilled jobs and continued job training, we improve the lives of people by promoting freedom of association, nondiscrimination and the abolition of child labor. We also uphold the principles of the Universal Declaration of Human Rights.

Sappi Limited has been a signatory of the United Nations Global Compact (UNGC) since 2008. We submit an annual communication on progress that describes our company’s ongoing efforts to support the social and environmental principles of the UNGC. More details are available in our Group Sustainability Report which can be found at sappi.com in the “Our Global Commitments” section. Set forth here are the important social responsibility performance indicators for Sappi North America in 2016.

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“The forest products industry employed 914,000 people in 2015. Of these, 102,000 people were employed at pulp, paper and paperboard mills, 271,000 at paper and paperboard converting plants, 380,000 at lumber and wood panel facilities, and 110,000 at wood kitchen cabinet plants.”

AF&PA 2016 Sustainability Report
The Ten Principles of The United Nations Global Compact:

**Human Rights**
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2: make sure that they are not complicit in human rights abuses.

**Labour**
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4: the elimination of all forms of forced and compulsory labour;
Principle 5: the effective abolition of child labour; and

**Environment**
Principle 7: Businesses should support a precautionary approach to environmental challenges;
Principle 8: undertake initiatives to promote greater environmental responsibility; and
Principle 9: encourage the development and diffusion of environmentally friendly technologies.

**Anti-Corruption**
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

For more information visit unglobalcompact.org.
“In 2016, Sappi North America achieved many important milestones as we continue to transform into a more diversified, sustainable business that meets the needs of our customers, communities, employees and shareholders. I am proud of this year’s accomplishments because they were the result of focus, planning, holding ourselves accountable and great execution by collaborative teams of employees. At Sappi, we are committed to the three P’s of sustainability, People, Planet and Prosperity, because we know that all three in balance create long-term business success and a workplace that attracts and retains the best employees.”

Mark Gardner
President and CEO
Sappi North America